

Question 1 of 193

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A 60-year-old man presents to the emergency department with crushing central chest pain. The pain came on suddenly approximately one hour ago. A 12-lead ECG reveals >2mm of ST elevation in all anterior and lateral leads. The nearest centre offering primary angioplasty is 140 minutes away. There is no contraindication to thrombolysis.

In addition to standard acute coronary syndrome treatment (analgesia, aspirin, a heparin and a P2Y12 inhibitor), what is the best management for this patient?

	Immediate transfer for acute angioplasty
	Non-urgent angioplasty
	Thrombolysis
	Thrombolysis and immediate transfer for acute angioplasty
	Thrombolysis and non-urgent angioplasty

Dashboard

Overall score: **0%**

1 -

□ Question 1 of 193

□ □

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	Non-urgent angioplasty
	Thrombolysis
	Thrombolysis and immediate transfer for acute angioplasty
	Thrombolysis and non-urgent angioplasty

Dashboard

Overall score: **0%****1** -

Question 2 of 193

□ □

A 28 year-old man with a background of asthma presents to the emergency department with palpitations.

He reports a 2 day history of coryzal symptoms and wheeze. He has been using his salbutamol inhaler several times per day due to these symptoms.

On examination the patient appears alert and comfortable but complains of a fluttering sensation in his chest. The pulse rate is 180bpm and the blood pressure is 135/90mmHg. Oxygen saturations are 96% on room air.

There is equal bilateral air entry with mild polyphonic wheeze throughout on chest auscultation.

A 12-lead ECG reveals a narrow-complex regular tachycardia at 180bpm with pseudo r' waves after each QRS complex in lead V1.

What is the most appropriate initial management?

	Adenosine 6mg IV
	Metoprolol 5mg IV
	Synchronised DC shock
	Vagal manoeuvres
	Amiodarone 300mg IV

Dashboard

Overall score: 0%

1 -

Question 2 of 193

□ □

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	Synchronised DC shock
	Vagal manoeuvres
	Amiodarone 300mg IV

Dashboard

Overall score: 0%

1 -

□ Question 3 of 193

□ □

You review a patient in cardiology outpatient clinic. He has a left ventricular ejection fraction of 15% on maximal medical therapy. On reviewing his ECG you note a QRS duration of 135ms without evidence of left bundle branch block. Upon taking a history you note the patient is breathless at rest and struggles to walk around his bungalow.

Which implantable device would be appropriate to consider?

	Cardiac resynchronisation therapy without defibrillator
	Cardiac resynchronisation therapy with defibrillator
	VVI pacemaker
	No implantable device recommended
	Implantable cardioverter defibrillator alone

Dashboard

Overall score: 0%

1 -

Question 3 of 193

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<input type="checkbox"/>	No implantable device recommended
<input type="checkbox"/>	Implantable cardioverter defibrillator alone

Dashboard

Overall score: **0%**

1 -

Question 4 of 193



A 59 year-old man with history of ischaemic heart disease and type 2 diabetes mellitus is eight hours post right curative hemicolectomy for bowel malignancy. In the surgical high-dependency unit he is noted to be tachycardic on the monitor

On examination the patient appears comfortable. The pulse rate is 200bpm and the blood pressure is 148/79mmHg. Oxygen saturations are 98% on 2L/min nasal oxygen. Capillary refill is 2 seconds. The chest is clear to auscultation.

A 12-lead ECG reveals a regular broad complex tachycardia with a monomorphic waveform at a rate of 200bpm.

Post-operative blood tests reveal:

Hb	131 g/l
Platelets	563 * 10 ⁹ /l
WBC	13.4 * 10 ⁹ /l
Na ⁺	141 mmol/l
K ⁺	4.1 mmol/l
Mg ⁺⁺	0.87 mmol/l
Urea	4.2 mmol/l
Creatinine	121 µmol/l
Bilirubin	23 µmol/l
ALP	109 u/l
ALT	34 u/l
Albumin	33 g/l

What is the most appropriate initial management?

	Magnesium sulphate 2g IV
	Amiodarone 300mg IV
	Synchronised DC shock
	Metoprolol 5mg IV
	Adenosine 6mg IV

Dashboard

Overall score: **0%**

1 -

	Magnesium sulphate 2g IV
	Amiodarone 300mg IV
	Synchronised DC shock
	Metoprolol 5mg IV
	Adenosine 6mg IV

Dashboard

Overall score: **0%**

1 -

□ Question 5 of 193

□ □

A 68-year-old male presented 7 days ago with an STEMI. An angiogram reveals significant stenosis in his mid-left anterior descending artery and a drug eluting stent was inserted. Today, he complains of increasing shortness of breath compared to before his admission and is associated with worse lower limb swelling than before. His latest transthoracic echocardiogram reveals an ejection fraction of 33% but his chest x-ray reveals minimal alveolar shadowing only. His medications include:

Ramipril 10mg OD
Bisoprolol 5mg OD
Aspirin 75mg OD
Clopidogrel 75mg OD
Furosemide 80mg OD

How can his heart failure management be optimised?

	Start spironolactone
	Increase furosemide to 80mg BD
	Start eplerenone
	Start candesartan
	Increase bisoprolol to 10mg

Dashboard

Overall score: 0%

1 -

Question 5 of 193

□ □

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	Start eplerenone
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	Increase bisoprolol to 10mg

Dashboard

Overall score: **0%**

1 -

□ Question 6 of 193

□ □

A 19-year-old female presents to the medical outpatient with a history of palpitations. She suffers from bouts of anxiety and dizziness associated with these palpitations and has had one episode of syncope. She has had bouts of atrial fibrillation in the past, although documentary evidence is not available.

On examination, her blood pressure is 125/85 mmHg and her pulse is 140 bpm.

Her ECG reveals a broad complex regular tachycardia with a short PR interval and a slurred upstroke of the QRS complex. There is additionally a tall R wave in V1.

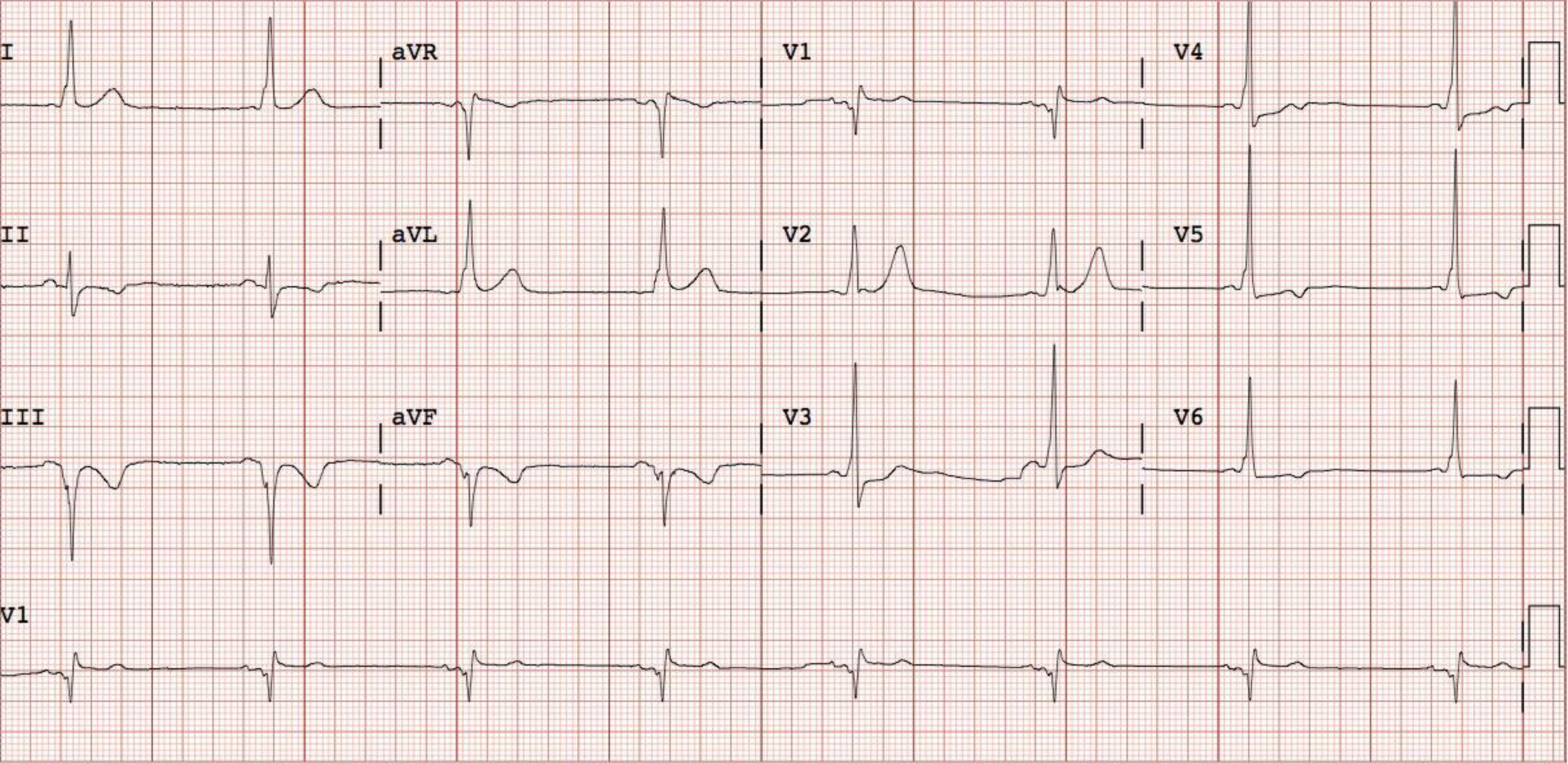
Which of the following would be the most appropriate initial step in medical management?

	IV adenosine
	IV verapamil
	IV digoxin
	IV propranolol
	IV procainamide

Dashboard

Overall score: 0%

1 -



□ Question 6 of 193



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Dashboard

Overall score: **0%**

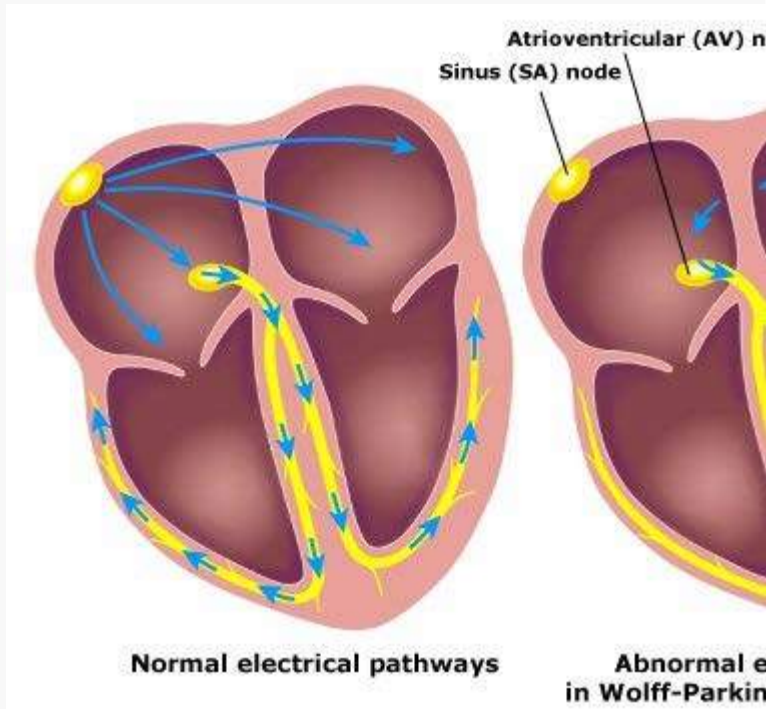
1 -

Question 6 of 193

A 19-year-old female presents to the medical outpatient with palpitations and dizziness associated with these palpitations and has had atrial fibrillation in the past, although documentary evidence is not available. On examination, her blood pressure is 125/85 mmHg and heart rate is 150 bpm. Her ECG reveals a broad complex regular tachycardia with a Q wave in V1.

Which of the following would be the most appropriate initial treatment?

	IV adenosine
	IV verapamil
	IV digoxin
	IV propranolol
	IV procainamide



Dashboard

Overall score: 0%

1 -

□ Question 7 of 193

□ □

A 65-year-old man is reviewed in the Emergency Department. Twelve months ago he had a prosthetic aortic valve replacement for progressive aortic stenosis. Since the operation he has been well but over the past two weeks he has been complaining of lethargy, fever and anorexia. Blood tests show a CRP of 215 mg/l. The chest x-ray and urine dip are unremarkable.

Given the suspicion of infective endocarditis an transoesophageal echocardiogram is performed which demonstrates a large vegetative lesion around the prosthetic aortic valve.

What is the most appropriate antibiotic treatment whilst awaiting blood cultures?

	IV amoxicillin
	IV teicoplanin + vancomycin
	IV flucloxacillin + low-dose gentamicin
	IV vancomycin + rifampicin + low-dose gentamicin
	IV teicoplanin + rifampicin

Dashboard

Overall score: 0%

1 -

Question 7 of 193

□ □

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What is the most appropriate antibiotic treatment whilst awaiting blood cultures?

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	IV teicoplanin + vancomycin
	IV flucloxacillin + low-dose gentamicin
	IV vancomycin + rifampicin + low-dose gentamicin
	IV teicoplanin + rifampicin

Dashboard

Overall score: **0%**

1 -

Question 8 of 193

A 53-year-old woman is found to have a systolic murmur on a routine check-up. A transthoracic echocardiogram reveals severe primary mitral regurgitation and a left ventricular ejection fraction of 55%, with other valves showing no significant pathology. A routine ECG demonstrates sinus rhythm. On questioning, she has no attributable symptoms such as shortness of breath, reduced exercise tolerance or chest pain. She is normally very active and works in an insurance firm. She has a past medical history of well-controlled asthma, post-partum depression and a tibial fracture one year ago. She has a salbutamol inhaler but no other regular medications. What is the most appropriate management plan?

<input type="checkbox"/>	Follow-up in six months
<input type="checkbox"/>	Start nitrites
<input type="checkbox"/>	Stop salbutamol
<input type="checkbox"/>	Exercise testing
<input type="checkbox"/>	Referral for mitral valve surgery

Dashboard

Overall score: 0%

1 -

□ Question 8 of 193

□ □

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	Follow-up in six months
	Start nitrites
	Stop salbutamol
	Exercise testing
	Referral for mitral valve surgery

Dashboard

Overall score: **0%****1** -

□ Question 9 of 193



A 55-year-old with previous rheumatic heart disease aged 32 presents with an 18-month history of exertional dyspnoea. An initial echo demonstrated significant raised pulmonary arterial pressures of 77 mmHg, she undergoes a left and right heart catheter with results as follows:

Right atrium	8 mmHg	71%
Right ventricle	39/8 mmHg	71%
Pulmonary artery	45/12 mmHg	71%
Capillary wedge	20 mmHg	93%
Left ventricle	165/11 mmHg	93%
Aorta	90/58 mmHg	

What is the most likely diagnosis?

	Aortic stenosis
	Mitral stenosis
	Aortic stenosis and mitral stenosis
	Aortic stenosis and pulmonary hypertension
	Aortic stenosis, mitral stenosis, pulmonary hypertension

Dashboard

Overall score: 0%

1 -

□ Question 9 of 193



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What is the most likely diagnosis?

	Aortic stenosis
	Mitral stenosis
	Aortic stenosis and mitral stenosis
	Aortic stenosis and pulmonary hypertension
	Aortic stenosis, mitral stenosis, pulmonary hypertension

Dashboard

Overall score: **0%**

1 -

□ Question 10 of 193

□ □

A 77 year old woman is brought to the Emergency Department by blue light ambulance in acute respiratory distress. She has a background history of congestive cardiac failure (NYHA II) due to hypertension and a previous anterior myocardial infarction which was treated medically. She is also a type 2 diabetic and has chronic kidney disease stage 2. She takes aspirin 75mg od, simvastatin 40mg od, ramipril 5mg od, bisoprolol 5mg od, furosemide 40mg bd and vildagliptin 5mg od.

On assessment her airway is patent. Respiratory rate is 32 per minute. Fingertip oxygen saturations are 90% on 15L/min oxygen. There are bilaterally crackles in the chest to above the midzones. Heart rate is 112bpm. Blood pressure is 125/75mmHg. ECG shows sinus tachycardia with no acute ischaemic change. There is peripheral oedema to the mid thigh and the JVP is elevated 6cm.

Which medical therapy is most appropriate immediately?

	3mg bumetanide orally
	80mg furosemide intravenously
	300mg aspirin, 300mg clopidogrel and 2.5mg subcutaneous fondaparinux
	50mg glycerol trinitrate infusion, commencing at 1mg/hr
	5mg metoprolol intravenously

Dashboard

Overall score: 0%

1 -

Question 10 of 193

□ □

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Dashboard

Overall score: **0%**

1 -

Question 11 of 193



You are called to review a 68-year-old who is complaining of chest pain on the ward. She was admitted 6 days ago after having a stroke which has left her with a mild degree of right-sided hemiparesis. She has some difficulty articulating the nature of the pain but describes it as central.

Her past medical history includes hypertension and hypothyroidism. She has not had a previous stroke or transient ischaemic attack previously.

On examination the heart rate is 102/min, blood pressure 122/78 mmHg, respiratory rate 22/min and oxygen saturations 97% on room air.

The nurse record an ECG:



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What is the most likely diagnosis?

	Subarachnoid haemorrhage
	Inferior myocardial infarction
	Hypokalaemia

	Posterior myocardial infarction
	Pulmonary embolism

Dashboard

Overall score: **0%**
1 -

□ Question 11 of 193



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	Pulmonary embolism

Dashboard

Overall score: **0%**
1 -

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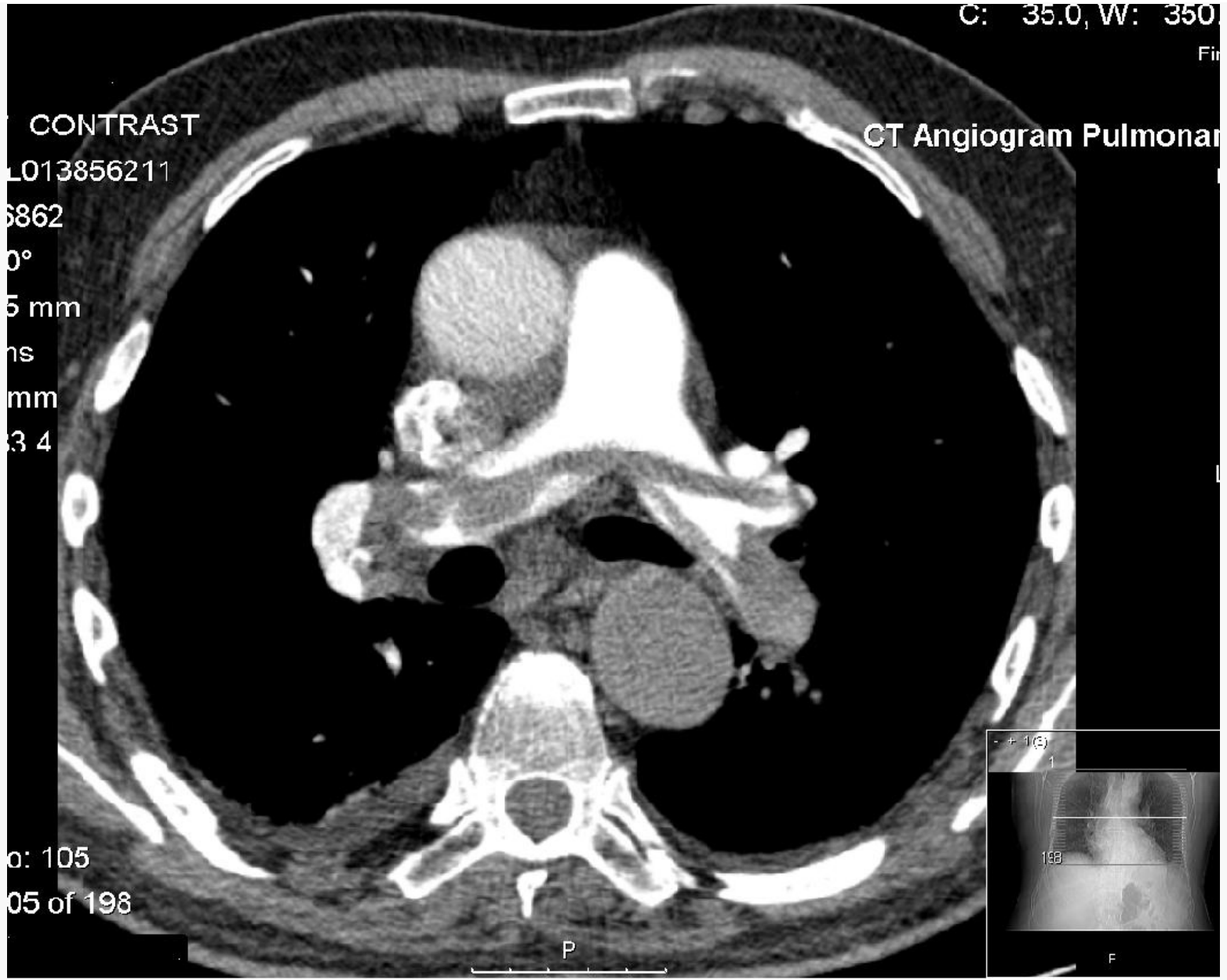
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Question 11 of 193

You are called to review a 68-year-old who is complaining of chest pain. She has a history of having a stroke which has left her with a mild degree of right-sided weakness. The nature of the pain is atypical in nature of the pain but describes it as central.

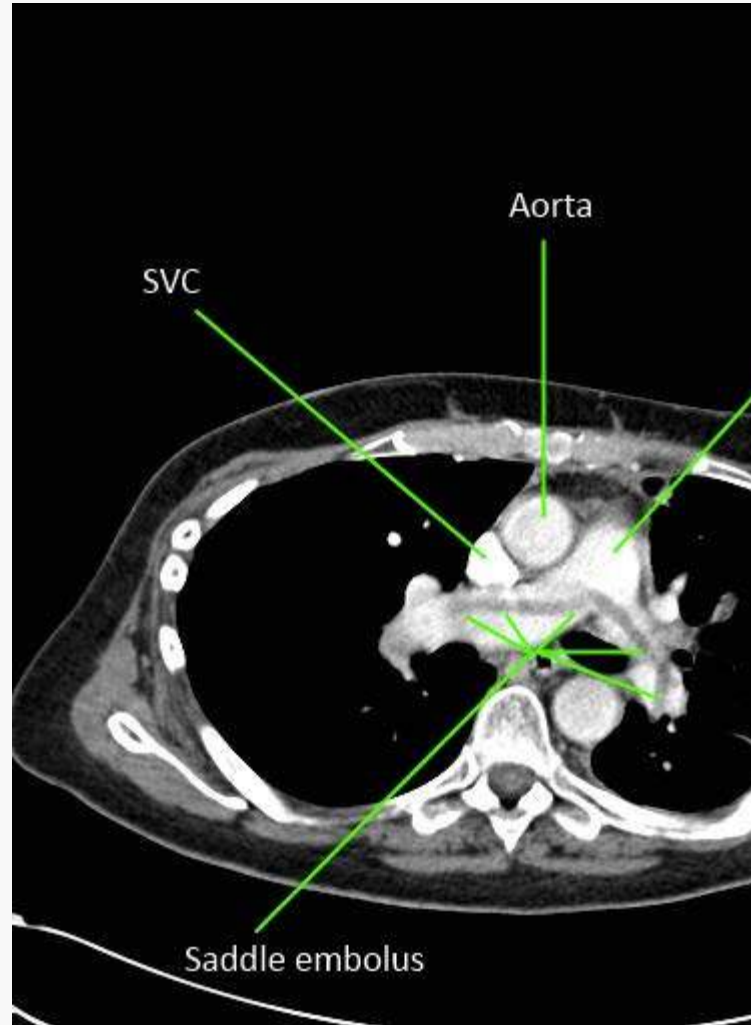
Her past medical history includes hypertension and hypothyroidism. She has had a previous ischaemic attack previously.

On examination the heart rate is 102/min, blood pressure 122/78 mmHg, oxygen saturation 97% on room air.

The nurse records an ECG:



© Image used on license from Dr Smith, University of Minnesota



What is the most likely diagnosis?

	Subarachnoid haemorrhage
<input type="checkbox"/>	Inferior myocardial infarction
<input type="checkbox"/>	Hypokalaemia

Question 12 of 193

□ □

You are asked by nursing staff to review 78-year-old female on the ward after concerns about her blood pressure in her observations chart. Her blood pressure is 78/44mmHg, previously 120/70 mmHg 4 hours ago. You note similar hypotensive episodes yesterday and 3 days ago. At present, she is lying flat and denies any symptoms. In fact, she is awaiting discharge the next day when her package of care can be restarted. Her medications includes: aspirin 75mg, metformin 500mg BD, Sinemet 125 TDS, bisoprolol 1.25mg. What should you do next?

	Monitor only
	Increase her dose of L-dopa
	Stop bisoprolol
	Intravenous broad spectrum antibiotics
	Intravenous fluids

Dashboard

Overall score: 0%

1 -

Question 12 of 193

□ □

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	Monitor only
	Increase her dose of L-dopa
	Stop bisoprolol
	Intravenous broad spectrum antibiotics
	Intravenous fluids

Dashboard

Overall score: **0%**

1 -

□ Question 13 of 193

□ □

A 43-year-old man presents with palpitations to the emergency department. His ECG demonstrates a broad complex tachycardia at 180 beats/min, suggestive of ventricular tachycardia. His blood pressure is 134/80 mmHg, he is uncomfortable but alert. The emergency department doctor has administered a 300mg bolus of amiodarone and the consultant subsequently inserted a central venous line to continue amiodarone treatment with a 900mg infusion over 24 hours. He transiently settles but on the second day of admission, his cardiac monitor demonstrates persistent VT at 180 beats per minute again. His blood pressure is 140/75 mmHg. **What is your treatment?**

	No treatment
	Repeat bolus of amiodarone 300mg
	DC cardioversion
	Intravenous lidocaine infusion
	Emergency VT ablation

Dashboard

Overall score: 0%

1 -

□ Question 13 of 193

□ □


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	No treatment
	Repeat bolus of amiodarone 300mg
	DC cardioversion
	Intravenous lidocaine infusion
	Emergency VT ablation

Dashboard

Overall score: 0%

1 -

 Question 14 of 193



A 77-year-old female has been admitted electively for investigation of raised pulmonary arterial pressures (50 mmHg) detected on a transthoracic echocardiogram, which had otherwise demonstrated normal left ventricular function and chamber sizes. No valve abnormalities were identified. Her right heart catheter saturations are shown as below:

- SVC 76%
- IVC 74%
- RA (high) 73.5%
- RA (mid) 73%
- RA (low) 72.7%
- RV 72%
- PA 70.8%
- PCW 95%

What is the most likely diagnosis?

	Normal study
	Patent ductus arteriosus
	Anomalous pulmonary venous drainage to SVC
	Patent foramen ovale
	Tricuspid regurgitation

Dashboard

Overall score: 0%

1 -

Question 14 of 193

□ □

A 77-year-old female has been admitted electively for investigation of raised pulmonary arterial pressures (50 mmHg) detected on a transthoracic echocardiogram, which had otherwise demonstrated normal left ventricular function and chamber sizes. No valve abnormalities were identified. Her right heart catheter saturations are shown as below:

SVC 76%
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 RA (high) 73.5%
 RA (mid) 73%
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What is the most likely diagnosis?

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	Anomalous pulmonary venous drainage to SVC
	Patent foramen ovale
	Tricuspid regurgitation

Dashboard

Overall score: **0%**

1 -

□ Question 15 of 193



An 84-year-old female presents with a three-day history of constant chest discomfort associated with productive green sputum. On admission to the emergency department, a temperature of 38.2 degrees is recorded and she reports a recent history of 'shivering and shaking' over the past 24 hours. She reports no nausea or vomiting and was last well 72 hours ago, when she was living alone with BD carers. She has a known history of bronchiectasis, angina, hypertension, type 2 diabetes mellitus and hypertrophic obstructive cardiomyopathy.

On examination, you note bibasal coarse inspiratory crackles and an ejection systolic murmur. She has noted no deterioration in her exercise tolerance of 150 yards on flat ground. Her blood pressure is 140/85 mmHg heart rate 90/min and regular, Sats 94% on air, respiratory rate 26/min. Her ECG demonstrates ST depression and T wave inversion in V4 to V6, S wave in V1 and R wave in V5 add to 55 mm. You have no previous ECGs to compare this to.

Her blood tests are as follows:

Hb	137 g/l
Platelets	402 * 10 ⁹ /l
WBC	18.3 * 10 ⁹ /l
Neutrophils	16.3 * 10 ⁹ /l

Na ⁺	144 mmol/l
K ⁺	4.3 mmol/l
Urea	6.2 mmol/l
Creatinine	90 µmol/l
CRP	145 mg/l
Troponin < 0.03 (normal < 0.03)	

Her chest radiograph demonstrates left basal shadowing on a background of bibasal tramlining and fibrotic changes. Previous sputum cultures demonstrate pseudomonas colonisation. New sputum and blood cultures have been taken.

What is the most appropriate treatment?

	Intravenous tazocin
	Intravenous tazocin and acute coronary syndrome treatment
	Acute coronary syndrome treatment only
	Oral amoxicillin only
	Oral amoxicillin and acute coronary syndrome treatment

Dashboard

Overall score: **0%**

1 -

	Intravenous tazocin
	Intravenous tazocin and acute coronary syndrome treatment
	Acute coronary syndrome treatment only
	Oral amoxicillin only
	Oral amoxicillin and acute coronary syndrome treatment

Dashboard

Overall score: **0%**
1 -

□ Question 16 of 193

□ □

You are the medical doctor on an acute admission unit. An elderly female with recently diagnosed ovarian cancer, who is on day 8 of cisplatin chemotherapy presents with a temperature of 39°C, tachycardia at 130 bpm, blood pressure 128/68 mmHg, respiratory rate 14/min, sats 98% on room air.

She is complaining of abdominal pain and has been vomiting today. Her bloods and blood culture have been sent and you are awaiting the results. Her chest x-ray was normal and urine dipstick clear.

What is the most appropriate antibiotic therapy to start her on?

	IV benzylpenicillin + flucloxacillin
	IV augmentin
	IV ciprofloxacin
	IV piperacillin/tazobactam
	IV piperacillin/tazobactam + gentamicin

Dashboard

Overall score: 0%

1 -

Question 16 of 193

□ □

You are the medical doctor on an acute admission unit. An elderly female with recently diagnosed ovarian cancer, who is on day 8 of cisplatin chemotherapy presents with a temperature of 39°C, tachycardia at 130 bpm, blood pressure 128/68 mmHg, respiratory rate 14/min, sats 98% on room air.

She is complaining of abdominal pain and has been vomiting today. Her bloods and blood culture have been sent and you are awaiting the results. Her chest x-ray was normal and urine dipstick clear.

What is the most appropriate antibiotic therapy to start her on?

	IV benzylpenicillin + flucloxacillin
	IV augmentin
	IV ciprofloxacin
	IV piperacillin/tazobactam
	IV piperacillin/tazobactam + gentamicin

Dashboard

Overall score: **0%**

1 -

□ Question 17 of 193



A 72-year-old female presents with a 6-month history of gradual onset, progressive exertional dyspnoea associated bilateral increased lower limb pitting oedema. She has no previous cardiac history and prior to 6 months ago, had no limitations to exercise tolerance. Her past medical history includes B cell lymphoma diagnosed four years ago and in remission one course of chemotherapy. **On examination**, the jugular venous pulse is raised at 6cm above the angle of Louis. A soft systolic murmur and bibasal inspiratory crackles can be heard on auscultation. Abdominal examination demonstrates a pulsatile 3cm liver edge. Her blood pressure is 125/77 mmHg, heart rate 68/min and sinus, saturations 92% on 2l, respiratory rate 22/min. **ECG reveals** sinus rhythm of low voltage. **Chest radiography demonstrates** bibasal alveolar shadowing with prominent upper lobe vasculature.

Urine dip is as follows: blood -ve, leucocytes -ve, nitrates -ve protein 3+ pH 5.5.

Blood tests are as follows:

Hb	111 g/l
Platelets	$275 \times 10^9/l$
WBC	$8.3 \times 10^9/l$

Na ⁺	139 mmol/l
K ⁺	4.9 mmol/l
Urea	7.4 mmol/l
Creatinine	140 μ mol/l
CRP	3 mg/l
Trop	<0.03 (normal range < 0.03)

Bilirubin	6 μ mol/l
ALP	32 u/l
ALT	260 u/l

A transthoracic echocardiogram is performed, reported as significant increase in echogenicity, symmetrical left ventricular wall thickening, impaired bilateral diastolic ventricular dysfunction, bilaterally enlarged atria, pulmonary artery systolic pressure 45 mmHg, a 5mm pericardial effusion

What is the most likely underlying diagnosis for this patient?

	Amyloid cardiomyopathy
	Non-ST elevation myocardial infarction (NSTEMI)
	Idiopathic dilated cardiomyopathy
	Chemotherapy induced cardiomyopathy
	Viral pericarditis leading to tamponade

Dashboard

Overall score: 0%

1 -

A transthoracic echocardiogram is performed, reported as significant increase in echogenicity, symmetrical left ventricular wall thickening, impaired bilateral diastolic ventricular dysfunction, bilaterally enlarged atria, pulmonary artery systolic pressure 45 mmHg, a 5mm pericardial effusion

What is the most likely underlying diagnosis for this patient?

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	Idiopathic dilated cardiomyopathy
	Chemotherapy induced cardiomyopathy
	Viral pericarditis leading to tamponade

Dashboard

Overall score: 0%
1 -

□ Question 18 of 193

□ □

A 65-year-old woman presents to the emergency department with a painful leg. She had noticed that her calf started to become tender when she was getting dressed in the morning and found it to be swollen. She was concerned and called her GP surgery who gave her an emergency appointment. She was seen by her GP earlier in the day who suspected a deep vein thrombosis and advise her to attend her local emergency department.

She has a past medical history of breast cancer which was operated on three months ago with a wide local excision, and she has been told that the operation was successful in removing the cancer. Her observations are stable. On examination, she has a swollen left calf which is mildly tender without erythema. A D-dimer sent by the emergency department team was positive but all other blood tests are normal. She undergoes a doppler ultrasound scan which shows no thrombus. How should she be further managed?

	Start warfarin
	Repeat ultrasound scan within 6-8 days
	CT pulmonary angiogram
	Start treatment dose low-molecular weight heparin
	Repeat D-dimer

Dashboard

Overall score: 0%

1 -

Question 18 of 193

□ □

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	CT pulmonary angiogram
	Start treatment dose low-molecular weight heparin
	Repeat D-dimer

Dashboard

Overall score: **0%**

1 -

□ Question 19 of 193



You are called to see a 68-year-old man on the ward who has ongoing pyrexia for the past week. He was originally admitted after feeling unwell with fevers and rigors, and was treated for a urinary tract infection as his urine dipstick was positive for small amounts of leucocytes and moderate amounts of blood. He was started on co-amoxiclav 1.2g three times a day, and intravenous Gentamicin once daily was added 2 days ago but continues to develop daily fevers and lethargy. His past medical history includes a prosthetic mitral valve, atrial fibrillation, and type 2 diabetes mellitus.

On examination, his temperature is 38.5°C, heart rate of 90bpm, blood pressure 132/76mmHg, respiratory rate of 18 breaths per minute, and oxygen saturations of 99% on air. On close examination, he has splinter haemorrhages in four fingers across both hands, and on cardiovascular examination there is an audible pan systolic murmur not previously documented in the admission notes.

His latest blood results show

Na+	143 mmol/l
K+	4.8 mmol/l
Urea	7.2 mmol/l
Creatinine	88 µmol/l
Serum bilirubin	16 µmol/l
Serum alkaline phosphatase	115 IU/l
Serum aspartate aminotransferase	18 IU/l
C Reactive protein	76 mg/l
Haemoglobin	136 g/l
White cell count	11.6 x 10 ⁹ /L
INR	1.1

Three blood cultures taken one day apart each	No growth at 5, 4, and 3 days.
---	--------------------------------

Mid-Stream Urine culture	Mixed growth
WCC	10/mm ³

What would be the most effective strategy to culture the causative organism?

	Take two sets of optimally filled blood cultures at different sites while he is febrile now
	Take three sets of optimally filled blood cultures within one hour before changing antibiotics
	Take three sets of optimally filled blood cultures within twelve hours before changing antibiotics
	Stop antibiotics for one week, then take three sets of optimally filled blood cultures within one hour
	Stop antibiotics for one week, then take three sets of optimally filled blood cultures at least six hours apart each

Dashboard

Overall score: **0%**

1 -

□ Question 19 of 193



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Dashboard

Overall score: **0%**

1 -

Question 20 of 193



A 38 year old female of Asian descent, with no significant past medical history, presents after a syncopal event while pruning hedges. She has had a several month history of fevers, arthralgias and for the past few weeks has had multiple episode of vertigo and one syncopal event. She denies headaches or visual complaints. Her examination reveals a diminished radial pulse in the left arm and a systolic blood pressure difference in the upper extremities of 14 mmHg. A bruit is auscultated along the left upper extremity. Dopplers of the upper extremities indicate a stenotic area along the subclavian that is later confirmed by Magnetic Resonance Angiography (MRA). She is diagnosed with subclavian steal syndrome. Laboratory tests reveal a normocytic normochromic anemia, elevated CRP and ESR, negative ANA and ANCA, and all other laboratory tests are with in normal range. Of the following, What is the most likely diagnosis?

	Fibromuscular dysplasia
	Ehlers-Danlos syndrome
	Takayasu arteritis
	Giant cell arteritis
	Wegener's granulomatosis

Dashboard

Overall score: 0%

1 -

Question 20 of 193



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Dashboard

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1 -

□ Question 20 of 193

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Dashboard

Overall score: **0%****1** -



□ Question 21 of 193



A 75-year old gentleman with a background of type II diabetes mellitus, ischaemic heart disease (IHD) and New York Heart Association (NYHA) III heart failure presents to your clinic with continuing fatigue and shortness of breath on minimal exertion. He currently takes Aspirin 75mg, Bisoprolol 10mg, Ramipril 5mg, Furosemide 40mg twice daily and Spironolactone 25mg. His electrocardiograph demonstrates left bundle branch block (old) and his ejection fraction is 32% measured by echocardiography at the clinic today. His chest x-ray shows an enlarged cardio-thoracic ratio but no obvious pulmonary oedema. Blood tests taken with his general practitioner this week are as follows:

Haemoglobin	110g/dl
White cell count	11.0×10^9
Neutrophils	7.2×10^9
Platelets	240×10^9
Na ⁺	137 mmol/l
K ⁺	4.2 mmol/l
Urea	9 mmol/l
Creatinine	125 μ mol/l

What evidence-based treatment, if any, is available to treat this gentleman's cardiac failure?

	Increase dose of Spironolactone to 50mg once daily
	Increase dose of Furosemide to 80mg twice daily
	Cardiac-resynchronisation therapy
	Angiography +/- coronary stenting
	He is already on maximal treatment

Dashboard

Overall score: **0%**

1 -

□ Question 21 of 193



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	Angiography +/- coronary stenting
	He is already on maximal treatment

Dashboard

Overall score: **0%**

1 -

□ Question 22 of 193

□ □

A 14-year-old female presented to her GP having collapsed at school. Her friends stated that whilst she was playing hockey she inexplicably collapsed and had lost consciousness for a few seconds. This was her first episode of collapse. No seizure activity was observed, and she made a full and spontaneous recovery a few moments later. She denied the presence of prodromal symptoms, and other than occasional palpitations upon exertion she was otherwise well. She had a cochlear implant inserted in early childhood for congenital hearing impairment but otherwise had no past medical history of note, and was not taking any medications. There was no family history of note.

Examination revealed the presence of a healthy athletic 14-year-old female. Her heart rate was 58bpm and regular, and her blood pressure 108/78 mmHg. Cardiovascular examination revealed a JVP of 3cm and was otherwise unremarkable with normal heart sounds. Gastrointestinal examination and neurological examinations were likewise unremarkable.

Initial investigations revealed the following results:

ECG: 57bpm normal, sinus rhythm QRS 112 ms, PR 122ms, QTc 502ms, normal ST and T wave morphology.

What is the most likely diagnosis?

	Brugada syndrome
	Romano Ward syndrome
	Wolff Parkinson White syndrome
	Jervell & Lange-Nielsen syndrome
	Hypertrophic obstructive cardiomyopathy

Dashboard

Overall score: 0%

1 -

□ Question 22 of 193

□ □

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	Wolff Parkinson White syndrome
	Jervell & Lange-Nielsen syndrome
	Hypertrophic obstructive cardiomyopathy

Dashboard

Overall score: 0%

1 -

□ Question 23 of 193

□ □

A 32-year-old male illicit drug user is caught attempting to sell cocaine on the street by the police. On seeing the officers approach him, he swallows a plastic bag containing around 1.5g of cocaine in an attempt to destroy the evidence. The police officers bring the gentleman into the emergency department. He is asymptomatic and complains of no chest pain. His ECG is unremarkable and his admission blood tests demonstrate no abnormalities, including a negative troponin. What should you do next?

	Treat presumptively as acute coronary syndrome
	Discharge the patient to police custody
	Await 12 hour troponin and if negative, discharge to police custody
	Repeat ECG and if no dynamic changes, discharge to police custody
	Monitor the patient until the ingested cocaine is excreted

Dashboard

Overall score: 0%

1 -

□ Question 23 of 193

□ □

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	Monitor the patient until the ingested cocaine is excreted

Dashboard

Overall score: **0%****1** -

Question 24 of 193

A middle-aged man is admitted to the resuscitation room of the Emergency Department with crushing central chest pain. His ECG is shown below:



© Image used on license from Dr Smith, University of Minnesota



Where is the lesion most likely to be?

	Left circumflex
	Right coronary
	Left anterior descending
	Posterior interventricular
	Left main stem

Dashboard

Overall score: 0%

1 -

Question 24 of 193

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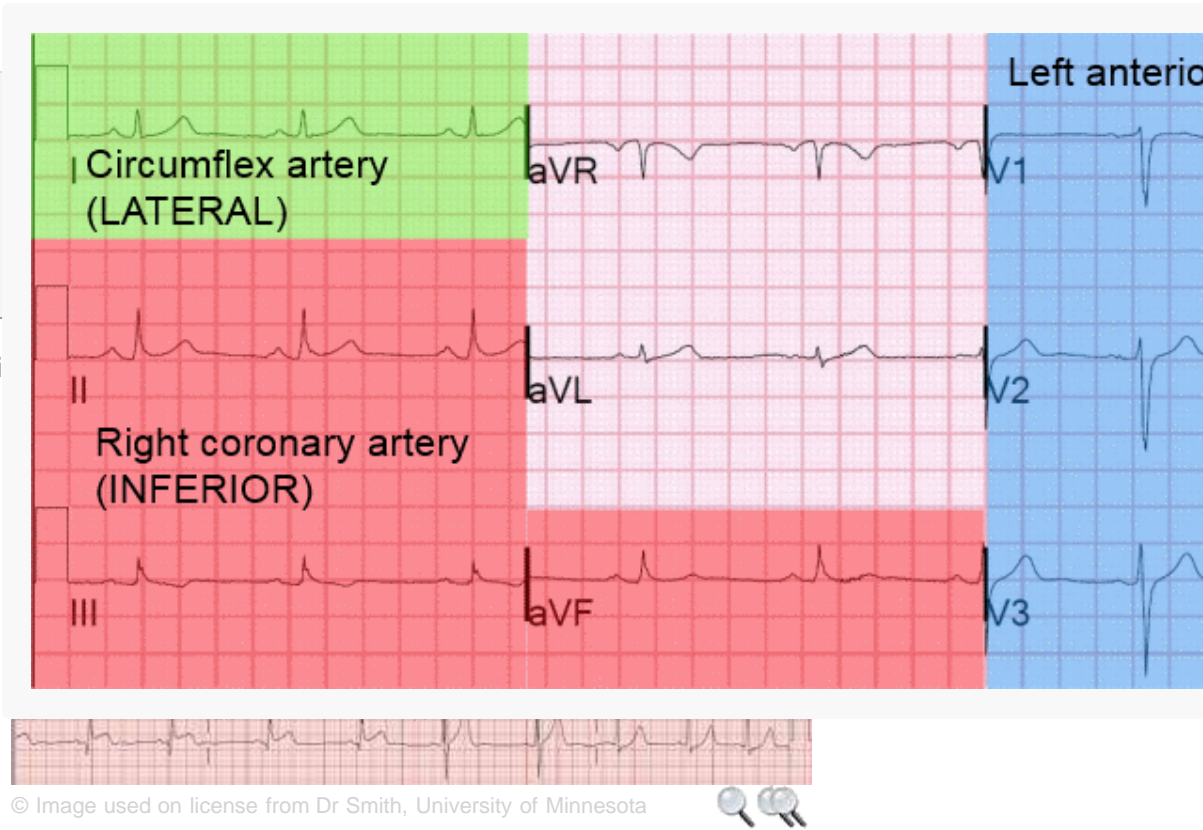
Dashboard

Overall score: 0%

1 -

Question 24 of 193

A middle-aged man is admitted to hospital with chest pain.
His ECG is shown below:



Where is the lesion most likely to be?

	Left circumflex
	Right coronary
	Left anterior descending
	Posterior interventricular
	Left main stem

Dashboard

Overall score: 0%

1 -

Question 25 of 193

□ □

A 40-year-old male who is otherwise fit and well presents to clinic with dyspnoea on exertion. This has progressed over the last year to the point where he can only walk 0.5 miles before stopping. He denies having a cough. He has no chest pain. He has smoked 15 cigarettes per day for 25 years. He reports that his father had a myocardial infarction (MI) aged 54 years, but otherwise reports no cardiac-related family history. His body mass index (BMI) is 24 kg/m², heart rate 80/min, blood pressure 130/77mmHg, respiratory rate 18/min and he is saturating at 97% on air. Chest auscultation reveals occasional expiratory wheeze and he has no pedal oedema. Auscultation of the heart reveals a fixed split S2. His jugular venous pressure is not elevated.

Chest X-ray: dilated pulmonary vessels.

ECG: sinus rhythm, 78/min, right bundle branch block (RBBB)

What is the likely cause of his exertional dyspnoea?

	Atrial septal defect
	Ischaemic heart disease
	Bronchial malignancy
	Chronic obstructive pulmonary disease
	Chronic pulmonary embolism

Dashboard

Overall score: 0%

1 -

Question 25 of 193

□ □

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	Ischaemic heart disease
	Bronchial malignancy
	Chronic obstructive pulmonary disease
	Chronic pulmonary embolism

Dashboard

Overall score: **0%**

1 -

Question 26 of 193

□ □

A 55 year old managing director presents with sudden onset retrosternal chest pain associated with light-headedness. She is a non-smoker and has no other past medical history, except undergoing the menopause 6 years ago and taking a short-course of hormone replacement therapy. On examination, she has cool peripheries and normal heart sounds. Her chest is clear with no peripheral oedema. Her calves are soft and non-tender. Her ECG demonstrates ST elevation in V2-V4, troponin 0.8 (normal range <0.03). Percutaneous coronary intervention was performed overnight, demonstrating no occlusions in her coronary arteries. However, ballooning of her left ventricular mid-cavity and apex was noted, in addition to left ventricular hypokinesia. What is the diagnosis?

	Inferior non-ST elevation myocardial infarction (NSTEMI)
	Hypertrophic obstructive cardiomyopathy
	Prinzmetal angina
	Pulmonary embolus
	Takotsubo cardiomyopathy

Dashboard

Overall score: 0%

1 -

Question 26 of 193

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	Inferior non-ST elevation myocardial infarction (NSTEMI)
	Hypertrophic obstructive cardiomyopathy
	Prinzmetal angina
	Pulmonary embolus
	Takotsubo cardiomyopathy

Dashboard

Overall score: **0%**

1 -

□ Question 27 of 193

□ □

An 82-year-old man is reviewed on the ward. He was admitted with recurrent falls four days ago. He has been found to have symptomatic postural hypotension with a drop of 50mmHg on standing in systolic blood pressure. He has a past medical history of hypertension, osteoporosis, radial fracture and COPD. He was taking ramipril and amlodipine, as well as inhalers and calcium supplements. He normally has a good functional baseline and is independent.

Despite stopping all antihypertensives on admission the physiotherapists are unable to mobilise him due to worsening of his symptoms on standing. At rest, he has a blood pressure of 150mmHg systolic. What is the most appropriate plan?

	Fludrocortisone
	Hydrocortisone
	Discharge bedbound and continue with physiotherapy at home
	Discharge bedbound with restarting antihypertensives
	Inpatient rehabilitation

Dashboard

Overall score: 0%

1 -

□ Question 27 of 193

□ □

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Dashboard

Overall score: **0%****1** -

Question 28 of 193



An 83-year-old male presents with ischaemic sounding chest pain that has persisted for the past one hour. A 12-lead ECG is performed and shows deep T wave inversion in leads V1 and V2.

Which is the most likely implicated coronary artery?

	Left circumflex artery
	Left main stem artery
	Proximal left anterior descending artery
	Right coronary artery
	Distal left anterior descending artery

Dashboard

Overall score: **0%**

1 -

Question 28 of 193

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Dashboard

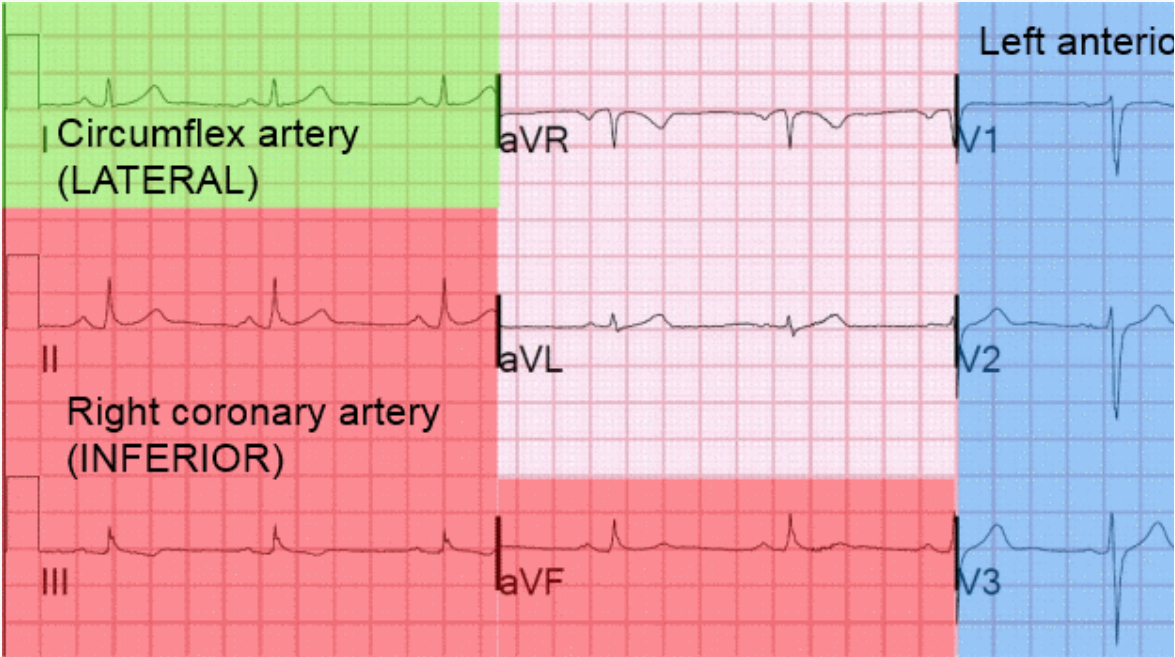
Overall score: **0%**

1 -

Question 28 of 193

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Left main stem artery
Proximal left anterior descending artery
Right coronary artery
Distal left anterior descending artery



Dashboard

Overall score: 0%
1 -

□ Question 29 of 193

□ □

A 74-year-old woman is admitted to the Emergency Department with shortness-of-breath. This has got progressively over the past 4 weeks and her exercise tolerance is now down to a few metres.

On examination her pulse is 110/min irregularly irregular. Bibasal crackles are noted on auscultation. A mechanical heart sound is noted.

A chest x-ray is taken:



© Image used on license from Radiopaedia



What is the most likely original diagnosis?

	Aortic stenosis
	Aortic regurgitation
	Tetralogy of Fallot
	Ebstein's anomaly
	Mitral stenosis

Dashboard

Overall score: 0%

1 -

□ Question 29 of 193

□ □

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Dashboard

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1 -

□ Question 29 of 193

□ □

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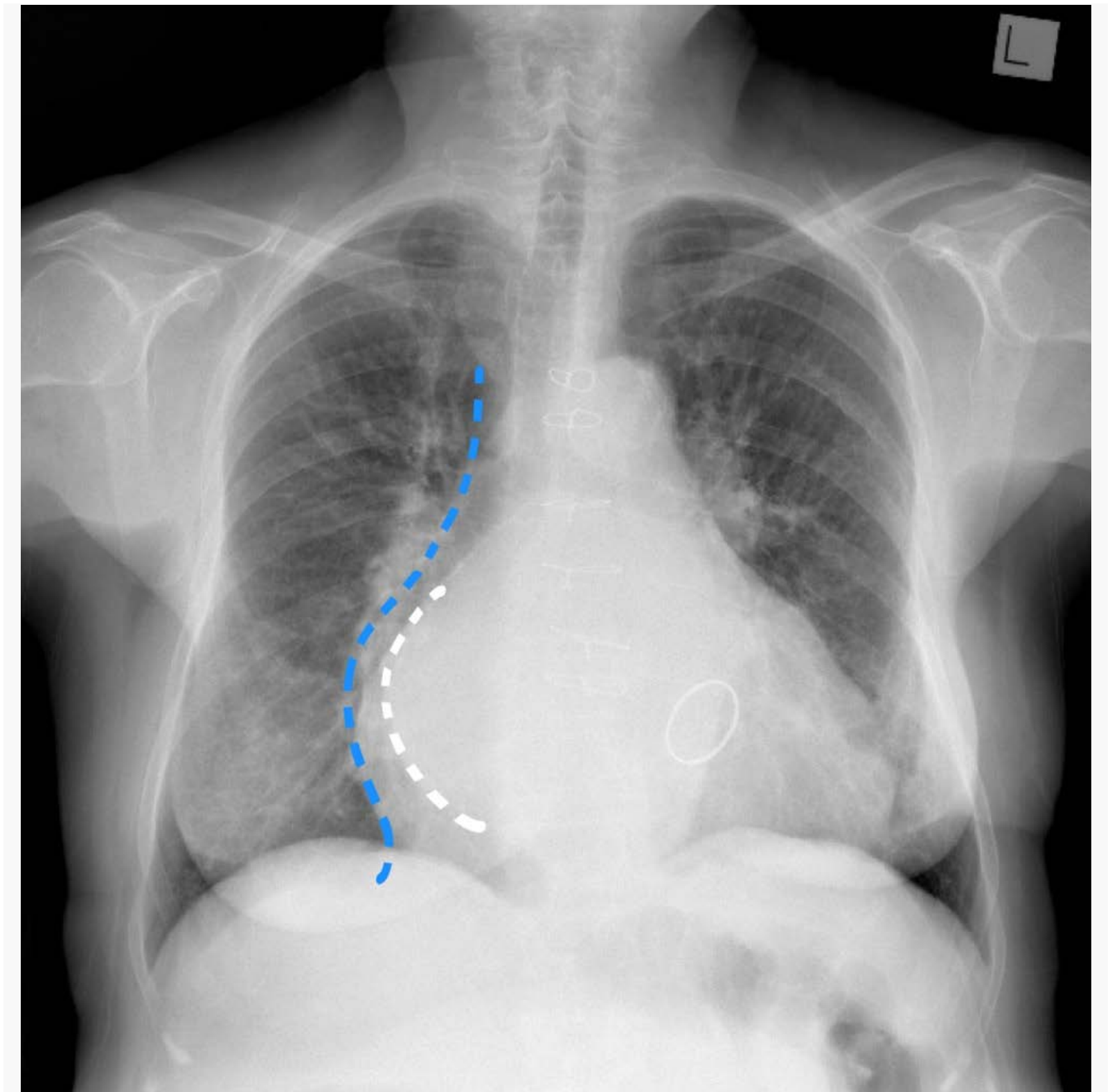
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	Tetralogy of Fallot
	Ebstein's anomaly
	Mitral stenosis

Dashboard

Overall score: 0%

1 -



Question 30 of 193

A 55-year-old man presents to the emergency department with shortness of breath.

He reports several months of worsening diarrhoea and is now passing over 10 watery motions per day.

On examination he is dyspnoeic at rest. The blood pressure is 104 / 77mmHg and the pulse rate is 90bpm and regular. Oxygen saturations are 93% on room air. Chest auscultation reveals widespread mild polyphonic wheeze and bibasal crackles. Jugular venous pressure is elevated and C-V waves are present. There is a pansystolic murmur at the left lower sternal border louder in inspiration. There is a palpable liver edge 2cm below the costal margin.

Which investigation is most likely to confirm the diagnosis?

	Growth hormone day curve
	24 hour urine 5-HIAA
	Faecal calprotectin
	24 hour urine VMA
	Stool sample for ova, cysts and parasites

Dashboard

Overall score: **0%**

1 -

Question 30 of 193

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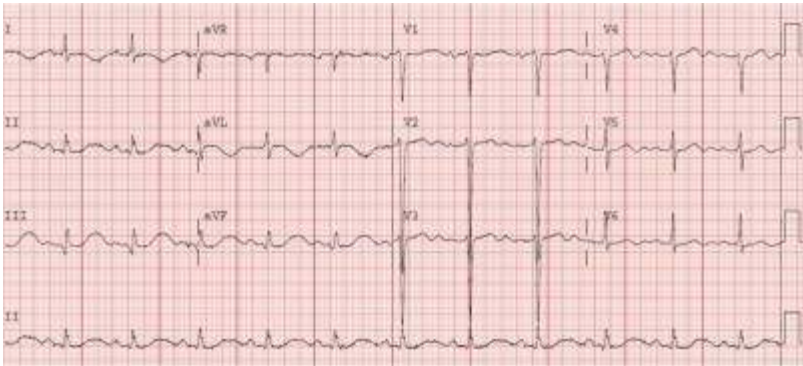
Dashboard

Overall score: **0%**

1 -

Question 31 of 193

A 23 year old with known ulcerative colitis presents for the fourth time in 6 months with a severe flare. On examination, he has a distended and generally tender abdomen. He was treated with intravenous hydrocortisone, standard 0.9% saline intravenous fluids and thromboprophylaxis. Although AXR demonstrated dilated large bowel loops, no operation was deemed necessary after surgical. The same treatment continued for 3 days. On day 3 of his admission, he reports chest pain with palpitations. A 12 lead ECG was taken:



© Image used on license from Dr Smith, University of Minnesota



What is the underlying diagnosis?

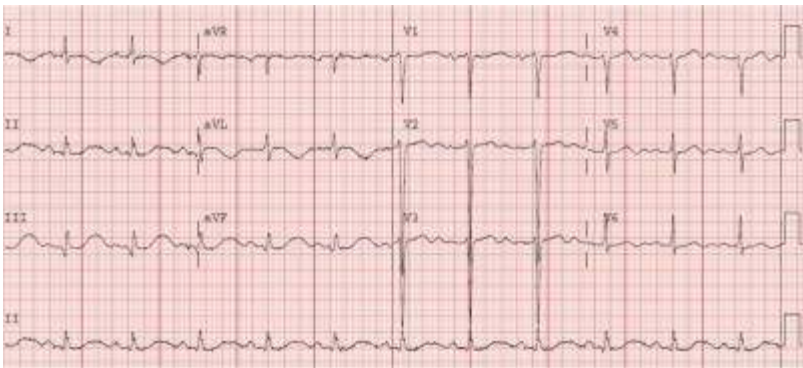
	Hyperkalaemia
	Hypokalaemia
	Hypocalcaemia
	Intravascular depletion → sinus tachycardia
	Atrial fibrillation

Overall score: **0%**

1 -

Question 31 of 193

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© Image used on license from Dr Smith, University of Minnesota

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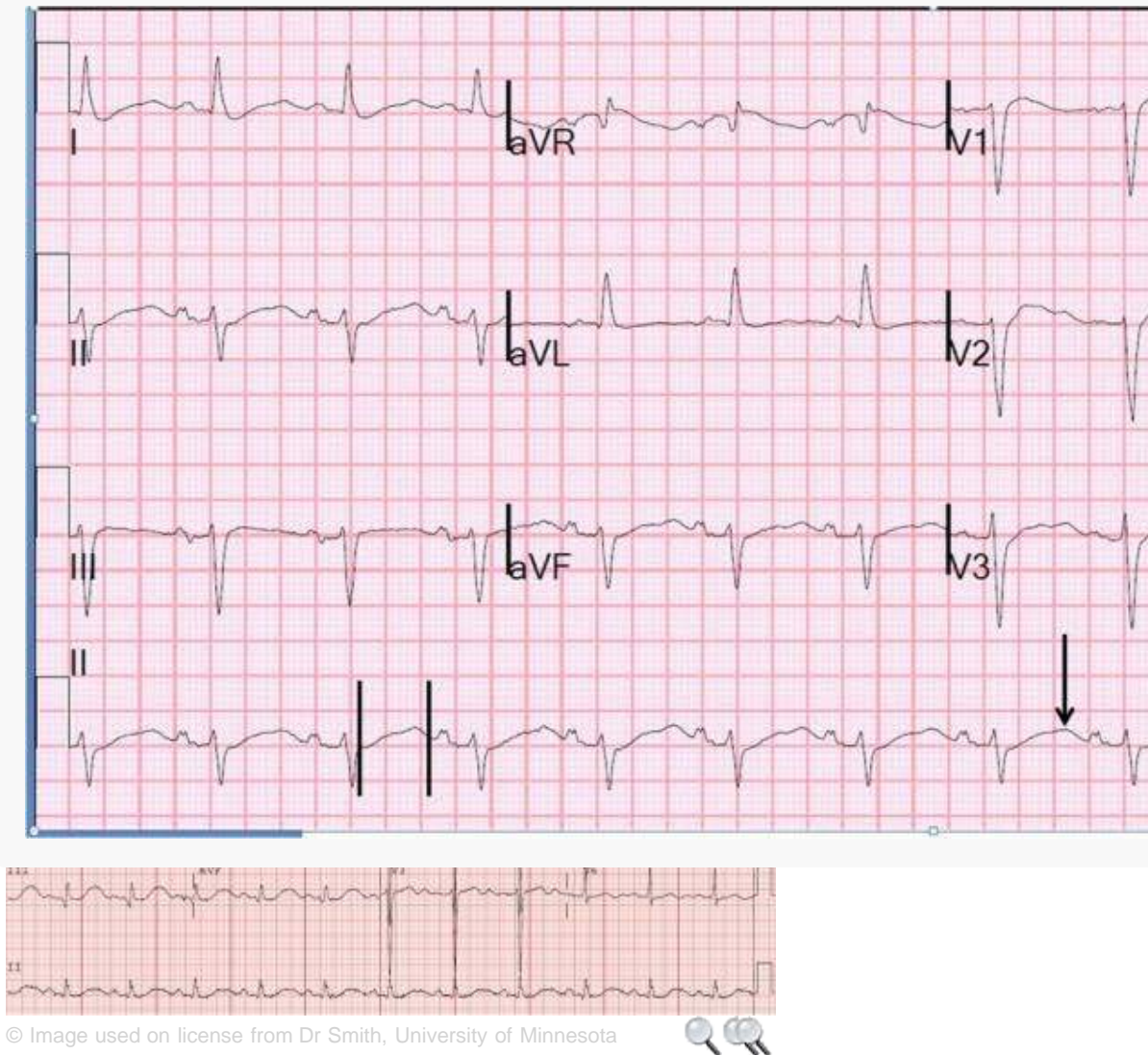
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	Hypokalaemia
	Hypocalcaemia
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	Atrial fibrillation

Overall score: **0%**

1 -

Question 31 of 193

A 23 year old with known ulcer has a distended and generalised saline intravenous fluids and was deemed necessary after chest pain with palpitations. /



What is the underlying diagnosis?

<input type="radio"/>	Hyperkalaemia
<input checked="" type="radio"/>	Hypokalaemia
<input type="radio"/>	Hypocalcaemia
<input type="radio"/>	Intravascular depletion → sinus tachycardia
<input type="radio"/>	Atrial fibrillation

Overall score: **0%**

1 -

Question 32 of 193

A 67-year-old woman attends Cardiology clinic. She has recently had a permanent pacemaker (PPM) inserted due to pre-syncope episodes associated with bradycardia. She reports an improvement in these symptoms since insertion, but notes exertional chest pain since the procedure. She has a past medical history of type 2 diabetes mellitus and hypercholesterolaemia, for which she takes metformin and atorvastatin.

What is the most cause of her symptoms?

<input type="checkbox"/>	Pacemaker lead malposition
<input type="checkbox"/>	Costochondritis
<input type="checkbox"/>	Bornholm disease
<input type="checkbox"/>	Pacemaker syndrome
<input type="checkbox"/>	Coronary ischaemia

Dashboard

Overall score: 0%

1 -

Question 32 of 193

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<input type="checkbox"/>	Bornholm disease
<input type="checkbox"/>	Pacemaker syndrome
<input checked="" type="checkbox"/>	Coronary ischaemia

Dashboard

Overall score: **0%**

1 -

Question 33 of 193



A 67-year-old man with a history of heart failure treated with bisoprolol, ramipril, furosemide and spironolactone comes to the clinic for review. His heart failure symptoms are stable, but his main complaint is of painful gynaecomastia that has become more prominent over the past 6 months since he had a medication change. On examination his blood pressure is 125/80 mmHg, his pulse is 65 beats per minute and regular. There are only minor basal crackles at both lung bases on auscultation, and minor pitting oedema of both ankles. Routine blood testing is unremarkable including creatinine.

Which of the following is the most appropriate way to manage his gynaecomastia?

	Change furosemide to bendroflumethiazide
	Change spironolactone to eplerenone
	Stop bisoprolol
	Stop ramipril
	Stop spironolactone

Dashboard

Overall score: 0%

1 -

Question 33 of 193

□ □

A 67-year-old man with a history of heart failure treated with bisoprolol, ramipril, furosemide and spironolactone comes to the clinic for review. His heart failure symptoms are stable, but his main complaint is of painful gynaecomastia that has become more prominent over the past 6 months since he had a medication change. On examination his blood pressure is 125/80 mmHg, his pulse is 65 beats per minute and regular. There are only minor basal crackles at both lung bases on auscultation, and minor pitting oedema of both ankles. Routine blood testing is unremarkable including creatinine.

Which of the following is the most appropriate way to manage his gynaecomastia?

	Change furosemide to bendroflumethiazide
	Change spironolactone to eplerenone
	Stop bisoprolol
	Stop ramipril
	Stop spironolactone

Dashboard

Overall score: **0%**

1 -

Question 34 of 193



A 60-year-old man is admitted to the Emergency Department with acute dyspnoea. He is unable to give a full history and his notes are not yet available.

His chest x-ray is shown below:



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What is the most likely explanation for these changes seen over the heart?

	Left ventricular aneurysm
	Sarcoidosis
	Atrial myxoma
	Primary hyperparathyroidism
	Previous episodes of uraemia

Dashboard

Overall score: 0%

1 -

□ Question 34 of 193

□ □

A 60-year-old man is admitted to the Emergency Department with acute dyspnoea. He is unable to give a full history and his notes are not yet available.

His chest x-ray is shown below:



© Image used on license from Radiopaedia



What is the most likely explanation for these changes seen over the heart?

	Left ventricular aneurysm
	Sarcoidosis
	Atrial myxoma
	Primary hyperparathyroidism
	Previous episodes of uraemia

Dashboard

Overall score: **0%**

1 -

Question 35 of 193

□ □

An 86-year-old female presents to the diabetic ulcer clinic for regular foot care when regular observations note her heart rate to be 42 beats per minute. Her blood pressure is 142/55 mmHg and she reports no recent episodes of syncope. A 12 lead ECG demonstrates Mobitz type 1 rhythm at 42 beats/ minute. A 24 hours tape performed as an outpatient demonstrates bradycardia with up to 2.7 second pauses. Her past medical history includes type 2 diabetes mellitus, hypertension and angina. Her medications include ramipril, furosemide, verapamil, metformin and GTN on an as-required basis. During this second encounter, her heart rate is 41 beats/min and her blood pressure is 115/ 57 mmHg. She informs you that she is guided by you in terms of the most appropriate treatment. What do you advise?

	Temporary pacing wire
	Permanent pacemaker insertion
	Stop verapamil
	Regular digoxin
	Stop furosemide

Dashboard

Overall score: 0%

1 -

□ Question 35 of 193

□ □

An 86-year-old female presents to the diabetic ulcer clinic for regular foot care when regular observations note her heart rate to be 42 beats per minute. Her blood pressure is 142/55 mmHg and she reports no recent episodes of syncope. A 12 lead ECG demonstrates Mobitz type 1 rhythm at 42 beats/ minute. A 24 hours tape performed as an outpatient demonstrates bradycardia with up to 2.7 second pauses. Her past medical history includes type 2 diabetes mellitus, hypertension and angina. Her medications include ramipril, furosemide, verapamil, metformin and GTN on an as-required basis. During this second encounter, her heart rate is 41 beats/min and her blood pressure is 115/ 57 mmHg. She informs you that she is guided by you in terms of the most appropriate treatment. What do you advise?

	Temporary pacing wire
	Permanent pacemaker insertion
	Stop verapamil
	Regular digoxin
	Stop furosemide

Dashboard

Overall score: **0%****1** -

□ Question 36 of 193



An 80-year-old lady is brought in by ambulance having been found unresponsive by her granddaughter.

She has a history of vascular dementia, hypertension, atrial fibrillation and mild congestive cardiac failure. She lives alone and is visited by her granddaughter, who is her main carer, once per day. Her granddaughter states she has been more confused recently, finding it hard to know the time of day, or whether she had had meals or medications, but has been otherwise well.

She takes aspirin 75mg once daily, amlodipine 5mg once daily, bisoprolol 5mg once daily, ramipril 2.5mg once daily, and simvastatin 40mg at night.

On examination in the Emergency Department she has Glasgow coma scale of 10. Her heart rate is 30/min and her blood pressure is 68/36 mmHg. Her saturations are 95% on 60% oxygen with a respiratory rate of 30 breaths per minute.

She has a regular heart rhythm and normal first and second heart sounds with an S3 gallop. Her jugular venous pressure is raised at 6 cm and she has pitting oedema to the knees. Her capillary refill is 4 seconds and she is peripherally cool. She has fine bibasal crepitations in both lungs. Her abdomen is soft and non-tender. Her temperature is 36.1°C.

Her ECG shows complete heart block with a ventricular rate of 30/min. Her QRS complexes are broad with a right bundle branch block pattern. There are signs of left ventricular hypertrophy but no T wave or ST segment abnormalities.

She is given 3mg of intravenously in atropine 500 mg boluses but heart rate remains 30/min with a blood pressure of 67/40 mmHg.

Which further medication is most likely to result in a sustained improvement in her heart rate?

	Aminophylline
	Dopamine
	Glucagon
	Isoprenaline

Dashboard

Overall score: **0%**

1 -

Question 36 of 193



An 80-year-old lady is brought in by ambulance having been found unresponsive by her granddaughter.

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	Aminophylline
	Dopamine
	Glucagon
	Isoprenaline

Dashboard

Overall score: **0%**

1 -

□ Question 37 of 193



A 73-year-old gentleman was referred to the cardiology clinic with deteriorating shortness of breath. He was diagnosed by his GP with heart failure following a direct access echocardiogram 6 years ago. Since then he has gradually deteriorated, to the extent that he is now short of breath with minimal activities of daily living. He slept on 4 pillows at night to alleviate shortness of breath symptom which would occur if he was lying flat. He had a past medical history of hypertension, hypercholesterolaemia, gout and diabetes. His medication regimen comprised ramipril 10mg OD, bumetanide 1mg BD, bisoprolol 7.5mg OD, simvastatin 40mg ON, allopurinol 100mg OD, metformin 500mg TDS, hydralazine 25mg BD, gliclazide 80mg OD and spironolactone 25mg OD

On examination, he had a heart rate of 56 bpm with a regular pulse and a blood pressure of 114/68 mmHg. Examination of the cardiovascular examination revealed the presence of a JVP of 5cm, with bilateral pitting oedema to the mid-shins. Examination of the respiratory system revealed the presence of reduced air entry bilaterally. Examination of the gastrointestinal examination was unremarkable.

Investigations revealed the following results:

Hb	162 g/l
Platelets	$125 \times 10^9/l$
WBC	$7.2 \times 10^9/l$

Na ⁺	136 mmol/l
K ⁺	3.8 mmol/l
Urea	8.6 mmol/l
Creatinine	142 μ mol/l

ECG: 54 bpm normal sinus rhythm, QRS interval 128ms, QTC 452 ms, presence of Q waves leads II, III and aVF
Chest x-ray: cardiomegaly, bilateral pleural effusions

Echocardiogram: severe left ventricular systolic impairment with residual 32% function, presence of aortic stenosis with pressure gradient 18mmHG, and presence of mild tricuspid and mitral regurgitation

Which is the next intervention most likely to improve this gentleman's symptoms and overall prognosis?

	Commence ranolazine
	Refer for angiography
	Refer for insertion of biventricular pacing therapy
	Commence ivabradine
	Refer to cardiothoracic team for consideration of valvular replacement

Dashboard

Overall score: 0%

1 -

□ Question 37 of 193



A 73-year-old gentleman was referred to the cardiology clinic with deteriorating shortness of breath. He was diagnosed by his GP with heart failure following a direct access echocardiogram 6 years ago. Since then he has gradually deteriorated, to the extent that he is now short of breath with minimal activities of daily living. He slept on 4 pillows at night to alleviate shortness of breath symptom which would occur if he was lying flat. He had a past medical history of hypertension, hypercholesterolaemia, gout and diabetes. His medication regimen comprised ramipril 10mg OD, bumetanide 1mg BD, bisoprolol 7.5mg OD, simvastatin 40mg ON, allopurinol 100mg OD, metformin 500mg TDS, hydralazine 25mg BD, gliclazide 80mg OD and spironolactone 25mg OD

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Dashboard

Overall score: 0%

1 -

□ Question 38 of 193

□ □

A 54-year-old male business executive is referred to you after a heart murmur is detected at a medical examination he received after he transferred to a new company. He has no known past medical history or family history. He is well and leads an active lifestyle. On examination, you note a pansystolic murmur in the apex. Chest auscultation is unremarkable. An ECG demonstrates sinus rhythm at 64 beats/minute with no changes suggestive of ventricular hypertrophy. A transthoracic echocardiogram demonstrated good views with severe mitral regurgitation, preserved left ventricular function (EF 85%) and pulmonary arterial systolic pressure of 15 mmHg. Which of the following is appropriate management?

	Mitral valve replacement
	Mitral valve repair
	Percutaneous mitral valve repair (Mitraclip)
	Infective endocarditis prophylaxis and 6 monthly echocardiogram
	6 monthly echocardiogram

Dashboard

Overall score: 0%

1 -

□ Question 38 of 193

□ □

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Dashboard

Overall score: **0%**

1 -

□ Question 39 of 193

□ □

A 72-year-old woman with a 30 year history of type 2 diabetes mellitus comes for review. She was diagnosed with chronic kidney disease (secondary to diabetes) 8 years ago and has seen declining renal function since. Her current medication includes ramipril 10mg od, amlodipine 10mg od, simvastatin 40mg on and Novomix 30 insulin bd.

Her most recent renal function tests show the following:

Na ⁺	139 mmol/l
K ⁺	5.3 mmol/l
Urea	10.2 mmol/l
Creatinine	123 µmol/l
eGFR	40 ml/min/1.73m ²

Blood pressure in clinic is 156/88 mmHg and this is confirmed on a second reading. What should be done regarding her blood pressure medication?

	Add bisoprolol
	Add indapamide
	Add doxazosin
	Add spironolactone
	Add an angiotensin II receptor blocker

Dashboard

Overall score: 0%

Question 39 of 193

□ □

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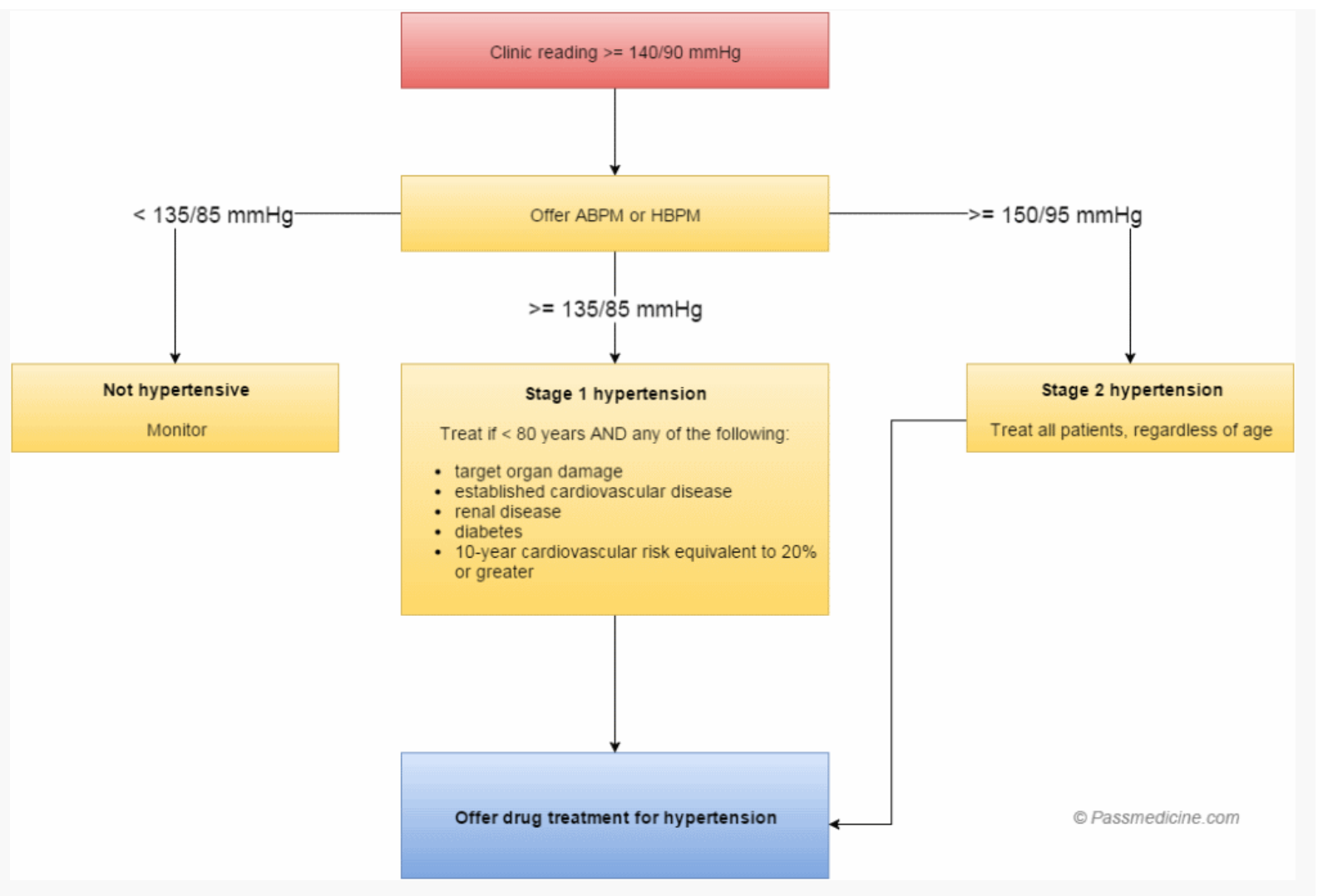
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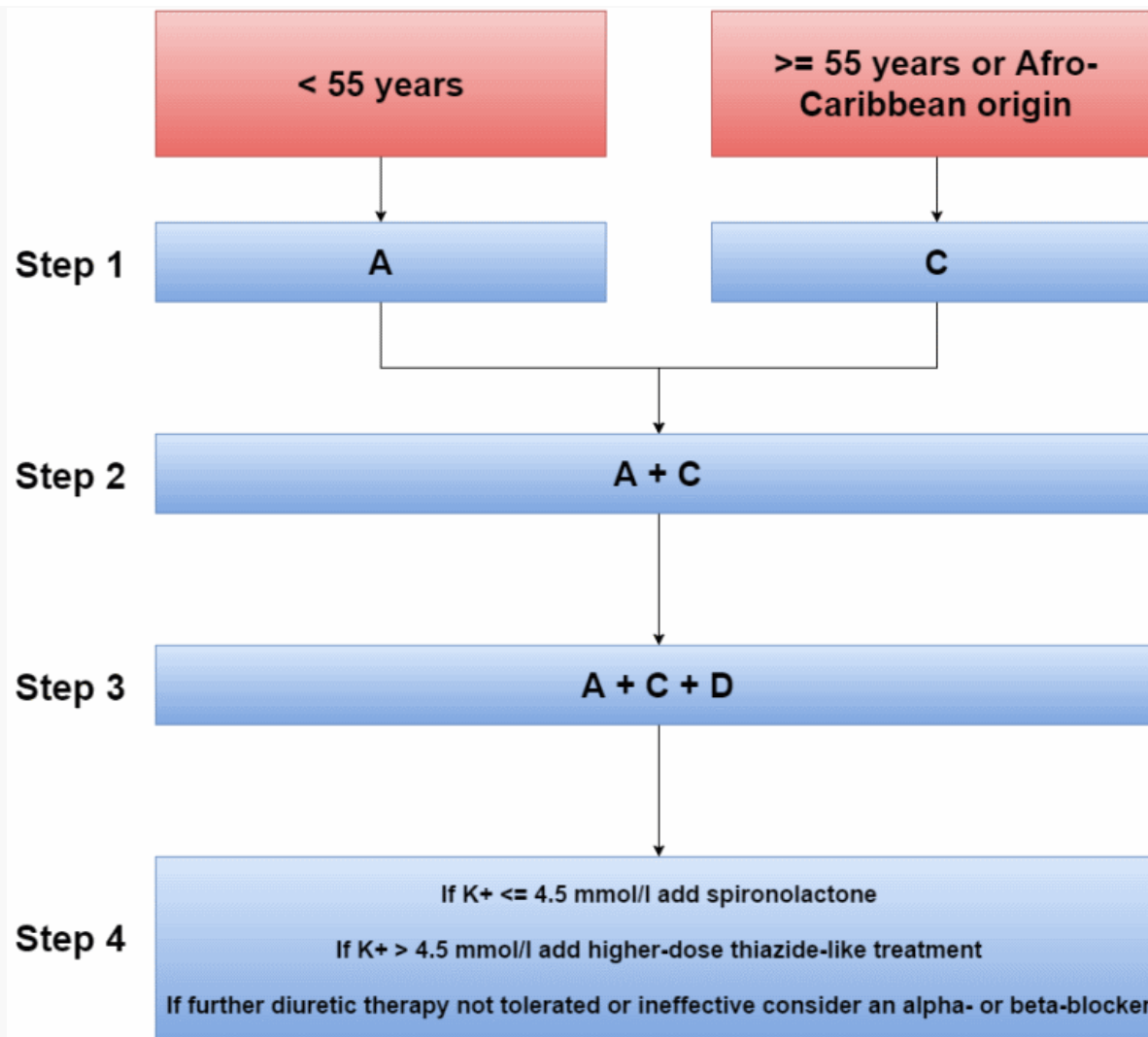
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Dashboard

Overall score: 0%

1 -



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Key

A = ACE inhibitor

C = Calcium channel blocker

D = Thiazide Diuretic

□ Question 40 of 193

□ □

A 72 year old gentleman has suffered from left hip pain for a number of years. His pain is there most days and worsens towards the end of the day. It is particularly severe if he has done the gardening or walked a long distance. His exercise tolerance is limited by the hip pain. Otherwise he is well and takes no medication apart from analgesia. He is a non smoker, drinks 4-6 units of alcohol per week and lives with his wife, who is also in good health.

He is scheduled for an elective left total hip replacement (THR) and attends the pre-assessment clinic. He is found to have an ejection systolic murmur that no one has previously documented. The rest of his examination is normal, his bloods are normal and a resting ECG shows normal sinus rhythm with no evidence of left ventricular hypertrophy. He is sent for a pre-operative echocardiogram. This confirms aortic stenosis with a gradient of 41 mmHg across the valve and normal left ventricular function with no hypertrophy.

In light of these findings how would you proceed?

	Continue with elective surgery but inform the GP in the discharge letter
	Postpone surgery until a cardiologist declares him fit for elective surgery
	Refer for balloon valvuloplasty
	Refer for aortic valve replacement
	Refer to a cardiologist for coronary angiogram prior to elective surgery

Dashboard

Overall score: 0%

1 -

□ Question 40 of 193

□ □

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	Refer to a cardiologist for coronary angiogram prior to elective surgery

Dashboard

Overall score: **0%**

1 -

Question 41 of 193

A 65-year-old gentleman is reviewed in cardiology clinic with known cardiomyopathy. He has started to develop symptoms of progressive exertional shortness of breath and is concerned about having this treated. He has not had any other symptoms and on examination, there is no peripheral oedema or chest signs. A recent echocardiogram demonstrates a provoked left ventricular outflow gradient of 64mmHg. What would be the most appropriate medical therapy?

<input type="checkbox"/>	Phosphodiesterase type 5 inhibitor
<input type="checkbox"/>	Beta-blocker
<input type="checkbox"/>	Nitrate
<input type="checkbox"/>	Digoxin
<input type="checkbox"/>	Ace-inhibitor

Dashboard

Overall score: 0%

1 -

Question 41 of 193

□ □

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	Phosphodiesterase type 5 inhibitor
	Beta-blocker
	Nitrate
	Digoxin
	Ace-inhibitor

Dashboard

Overall score: **0%**

1 -

Question 42 of 193

□ □

A 77-year-old female is electively admitted for investigation of bilateral lower limb swelling onset over the past 3 years associated with limitation of exercise as a result. Her past medical history includes bilateral pulmonary emboli in 2010 and type 2 diabetes mellitus. On examination, non-pitting bilateral lower limb oedema is noted to the high thighs without abdominal involvement. Her heart sounds are normal with no added sounds, her chest is clear. Her abdomen is soft and non-tender without ascites or superficial swelling. A transthoracic echocardiogram demonstrates normal left ventricular function but was unable to produce good views of the right heart. A CT pulmonary angiogram demonstrates no embolus, a ventilation-perfusion scan demonstrates a low probability of pulmonary emboli. Ultrasound abdomen is unremarkable. The patient undergoes a right heart catheter, demonstrating a mean pulmonary arterial pressure of 14mmHg. What is the likely cause of her lower limb swelling?

	Left heart failure
	Idiopathic pulmonary arterial hypertension
	Right heart failure
	Pelvic malignancy
	Lymphoedema

Dashboard

Overall score: 0%

1 -

Question 42 of 193



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	Right heart failure
	Pelvic malignancy
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Dashboard

Overall score: 0%

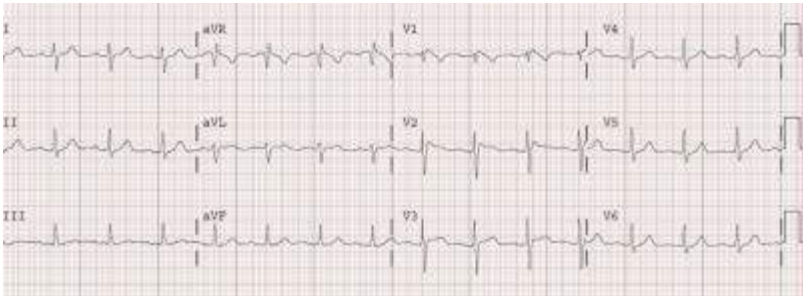
1 -

Question 43 of 193

A 30-year-old man is admitted to the Emergency Department after suffering a 'blackout' whilst at work. His colleagues report him collapsing without warning whilst waiting at the water machine. There has never happened before and he is normally fit and well.

On examination blood pressure is 102/68 mmHg, pulse 88/min, oxygen saturations 99% on room air and respiratory rate 16/min.

An ECG is taken:



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What is the most likely diagnosis?

	Hypertrophic obstructive cardiomyopathy
	Anterior myocardial infarction
	Long QT syndrome type 1
	Arrhythmogenic right ventricular dysplasia
	Brugada syndrome

Overall score: **0%**

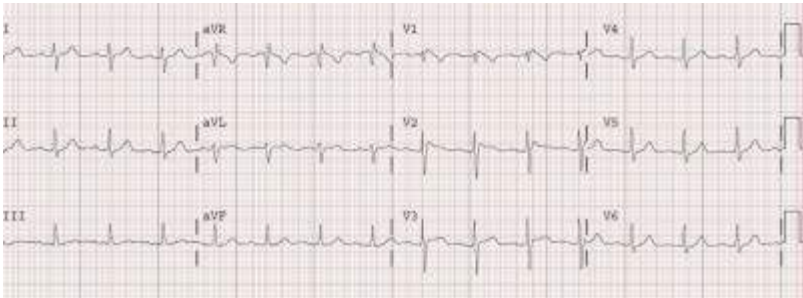
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Question 43 of 193

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Dashboard

Overall score: **0%**

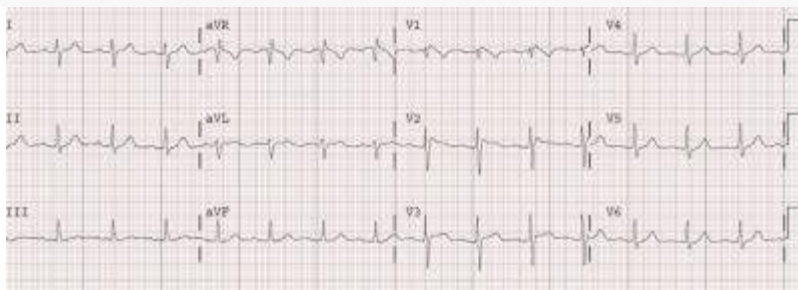
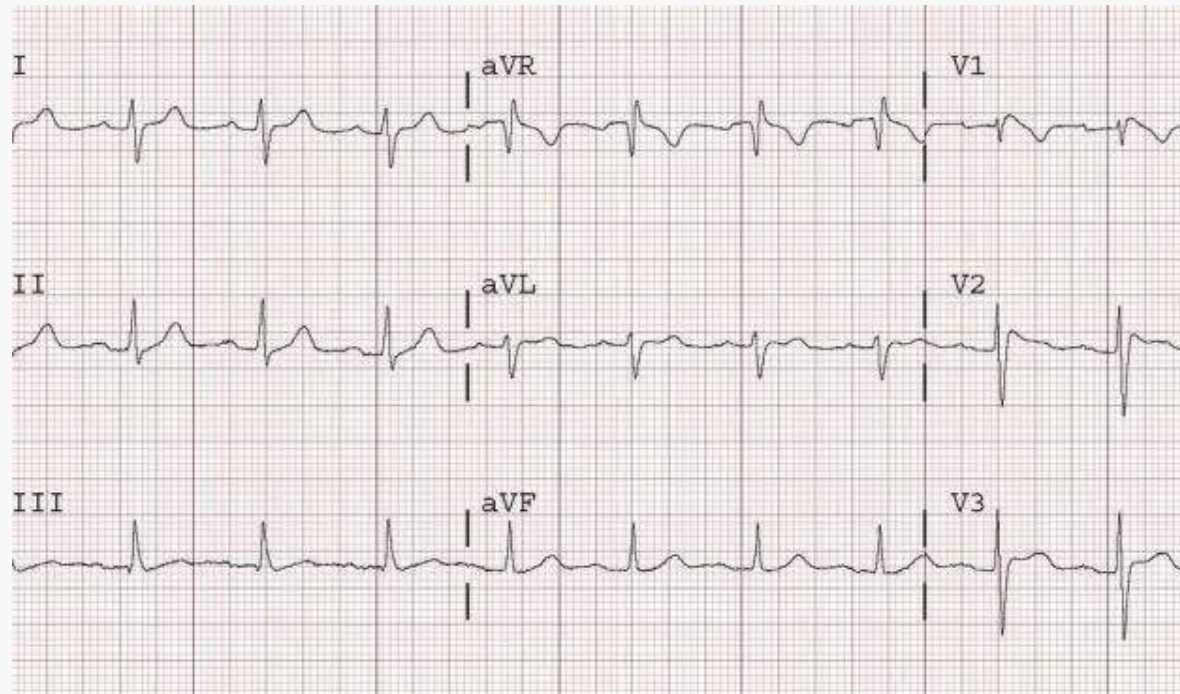
1 -

Question 43 of 193

A 30-year-old man is admitted to hospital. He reports him collapsing without warning. He is normally fit and well.

On examination blood pressure is 120/80 mmHg and heart rate is 66/min.

An ECG is taken:



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What is the most likely diagnosis?

<input type="radio"/>	Hypertrophic obstructive cardiomyopathy
<input type="radio"/>	Anterior myocardial infarction
<input type="radio"/>	Long QT syndrome type 1
<input type="radio"/>	Arrhythmogenic right ventricular dysplasia
<input checked="" type="radio"/>	Brugada syndrome

Dashboard

Overall score: **0%**

1 -

□ Question 44 of 193



A 76-year-old woman is brought into the Emergency Department following an episode of loss of consciousness. On more detailed review, she reveals that she has been suffering increasingly with shortness of breath on exertion, with great difficulty in managing her shopping and cleaning.

Her past medical history include right hip fracture 6 years ago after a fall walking down the stairs; this required a total hip replacement.

She takes no regular medication and has no drug allergies.

On examination, her pulse was 80 beats per minute, blood pressure 104/89 mmHg, and respiratory rate 16 breaths per minute. She had a slow rising pulse, and on auscultation of the chest there was an ejection systolic murmur heard loudest at the aortic area, and radiating to the carotid arteries.

Electrocardiogram (ECG) shows sinus rhythm and criteria for left ventricular hypertrophy.

Chest x-ray shows clear lung fields.

Transthoracic echocardiogram:

Aortic valve area	0.8 cm ² (3-4)
Transvalvular gradient	55 mmHg (0)

The diagnosis of aortic stenosis is explained to the patient, and she opts for open surgical valve replacement.

What other investigation is warranted before proceeding to aortic valve replacement?

	Exercise tolerance testing
	Dopamine stress echocardiogram
	24 hour holter ECG

	Transoesophageal echocardiogram
	Coronary angiography

Dashboard

Overall score: **0%**

1 -

□ Question 44 of 193



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	Dopamine stress echocardiogram
	24 hour holter ECG

	Transoesophageal echocardiogram
	Coronary angiography

Dashboard

Overall score: **0%**
1 -

Question 45 of 193

□ □

A 55-year-old man presents to the emergency department with shortness of breath.

He reports several months of worsening diarrhoea and is now passing over 10 watery motions per day.

On examination he is dyspnoeic at rest. The blood pressure is 104 / 77mmHg and the pulse rate is 90bpm and regular. Oxygen saturations are 93% on room air. Chest auscultation reveals widespread mild polyphonic wheeze and bibasal crackles. Jugular venous pressure is elevated and C-V waves are present. There is a pansystolic murmur at the left lower sternal border louder in inspiration. There is a palpable liver edge 2cm below the costal margin.

Which is the most likely underlying heart valve pathology?

	Infected platelet / fibrin deposits
	Fibrous endocardial thickening
	Sterile vegetations
	Annular dilatation
	Calcification

Dashboard

Overall score: 0%

1 -

Question 45 of 193

□ □

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	Sterile vegetations
	Annular dilatation
	Calcification

Dashboard

Overall score: **0%**

1 -

Question 46 of 193



A 50-year-old gentleman presented feeling dizzy and generally unwell for the last 3 days. He denied any chest pain, cough or fever but complained of increased fatigue and breathlessness. His past medical history included ischaemic heart disease, heart transplant, hypertension and diabetes. He takes the following medications: ramipril 5mg od, metformin 500mg bd, simvastatin 40mg od, amlodipine 5mg od and various immunosuppressive agents.

On examination his heart sounds were normal and chest was clear. There was only mild leg oedema. His vital signs show heart rate = 35 beats per minute, blood pressure = 90/40, SaO₂ = 95% on air, T = 36.5°C and respiratory rate = 20 breaths per minute. His ECG shows sinus bradycardia and CXR is clear. The following blood tests were obtained:

Hb	10.5 g/dl
Platelets	190 * 10 ⁹ /l
WBC	10.4 * 10 ⁹ /l

Na ⁺	135 mmol/l
K ⁺	3.6 mmol/l
Urea	8 mmol/l
Creatinine	100 µmol/l
CRP	15 mg/l

What is the next best management plan?

	Glucagon intravenous
	Atropine intravenous
	Theophylline intravenous
	Adrenaline 0.5mg intravenous

	Adrenaline 0.5mg intramuscular
--	--------------------------------

Dashboard

Overall score: **0%**

1 -

Question 46 of 193



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	Glucagon intravenous
	Atropine intravenous
	Theophylline intravenous
	Adrenaline 0.5mg intravenous

	Adrenaline 0.5mg intramuscular
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Dashboard

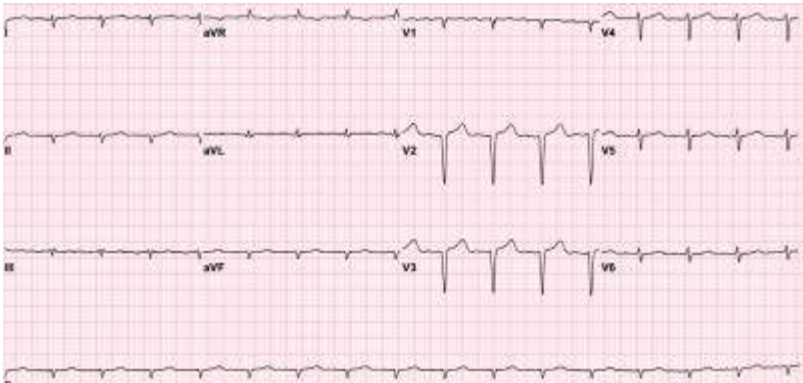
Overall score: **0%**
1 -

Question 47 of 193

An 81-year-old man is referred to the cardiology clinic due to worsening heart failure. Over the past 12 months he has become increasingly short-of-breath, particularly upon exertion or when lying flat. He has also suffered from ankle swelling which his GP has treated with large doses of furosemide. Around 6 months ago a clinical diagnosis of heart failure was made and he is already taking bisoprolol, ramipril and atorvastatin. He was diagnosed with multiple myeloma around 3 years and has been treated with melphalan to date.

On examination his pulse is 72/min and blood pressure 98/62 mmHg. The JVP is elevated at 6cm above the angle of Louis. There are crackles in both bases and pitting oedema to his knees.

An ECG accompanies the referral:



© Image used on license from Dr Smith, University of Minnesota

What is the most likely diagnosis?

	Constrictive pericarditis
	Infective endocarditis
	Chronic pulmonary embolism
	Cardiac amyloidosis

	Hypercalcaemia-induced heart failure
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Dashboard

Overall score: **0%**
1 -

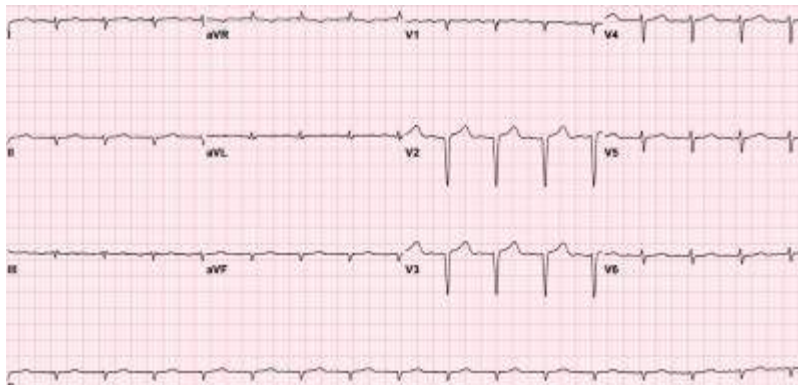
Question 47 of 193



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© Image used on license from Dr Smith, University of Minnesota



What is the most likely diagnosis?

	Constrictive pericarditis
	Infective endocarditis
	Chronic pulmonary embolism
	Cardiac amyloidosis

	Hypercalcaemia-induced heart failure
--	--------------------------------------

Dashboard

Overall score: **0%**
1 -

Question 48 of 193

□ □

A 53-year-old lady comes into the Emergency Department with a cough productive of green sputum and palpitations. She feels very unwell, feverish and lethargic. On examination, she has bronchial breathing at her right base with respiratory rate 25/min, sats 95% on room air. Her heart sounds are normal with an irregularly irregular heartbeat. Her heart rate was 120/min and blood pressure 90/40 mmHg. An ECG shows atrial fibrillation with a fast ventricular rate. She has no history of atrial fibrillation. What is the first treatment that should be given for her atrial fibrillation?

	Bisoprolol
	Digoxin
	Intravenous fluids
	Oral antibiotics
	Flecainide

Dashboard

Overall score: 0%

1 -

□ Question 48 of 193

□ □

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	Bisoprolol
	Digoxin
	Intravenous fluids
	Oral antibiotics
	Flecainide

Dashboard

Overall score: **0%****1** -

Question 49 of 193

□ □

A 59-year-old woman presents to the emergency department with shortness of breath. She has been progressively getting worse over two weeks and has now started to feel short of breath on rest. She is known to have mitral valve prolapse and is awaiting surgery but has so far not been given a date. She also has polycystic ovarian syndrome, type 2 diabetes and depression. She takes metformin, sertraline and furosemide.

On examination, she looks unwell. She has bilateral crepitations with no wheeze on auscultation of her chest, a raised JVP, and a systolic murmur. A chest X-ray shows pulmonary oedema. She is treated with IV diuretics but remains breathless and hypoxic. What kind of ventilatory support would be most appropriate?

	No ventilator support is appropriate
	Negative pressure ventilation
	Intubation
	Bilevel positive airway pressure (BIPAP)
	Continuous positive airway pressure (CPAP)

Dashboard

Overall score: 0%

1 -

Question 49 of 193

□ □

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	Negative pressure ventilation
	Intubation
	Bilevel positive airway pressure (BIPAP)
	Continuous positive airway pressure (CPAP)

Dashboard

Overall score: **0%**

1 -

□ Question 50 of 193

□ □

A 65-year-old man underwent an elective inguinal hernia repair. Due to the list running late into the evening, the patient was admitted for an overnight stay. During the night after the operation the patient was observed to have an increasing oxygen requirement and the following morning was referred to the oncall medical registrar.

The patient reported feeling progressively more short of breath since the operation, particularly when he had tried to lie down to sleep. He denied any cough, chest pain, leg swelling or palpitations. Prior to the operation the patient had been generally well although he had found that he frequently experienced double vision when reading especially in the evening. He also had noticed some difficulties when chewing tough foods in recent weeks. Past medical history was unremarkable and the patient took no regular medications.

Examination revealed a regular pulse, no elevation of jugular venous pressure and normal heart sounds. Both calves were soft and non-tender. The patient had a shallow respiratory effort and was unable to speak in full sentences. Chest expansion was reduced bilaterally, chest was resonant with vesicular breath sounds throughout. The patient had bilateral weakness of facial muscles and ptosis on prolonged upward gaze. Power of neck flexion and extension was reduced, graded as 4/5.

Basic observations:

- Blood pressure: 120 / 76 mmHg
- Heart rate: 115 beats / min
- Respiratory rate: 32 breaths / min
- Temperature: 36.8°C

Portable CXR: technically poor film due to poor inspiratory effort; clear lung fields; no pleural effusion; no upper lobe blood diversion; no free air under diaphragm.

Arterial blood gas analysis (35 % O₂)

pH	7.29
PaCO ₂	6.6 kPa
PaO ₂	8.7 kPa
Bicarbonate	18 mmol / L (reference 20.0-26.0)

Lactate	2.1 mmol / L
---------	--------------

Bedside forced vital capacity: 1.9 L

What is the most important next step in management?

	Pyridostigmine
	Referral to intensive care unit
	Reduce percentage of supplemental oxygen
	High-dose corticosteroids
	Intravenous immunoglobulin

Dashboard

Overall score: 0%

1 -

□ Question 50 of 193



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Dashboard
<p>Overall score: 0%</p> <p>1 -</p>

Question 51 of 193

□ □

A 54-year-old male presents to the emergency department with sudden onset palpitations and shortness of breath which began whilst he was watching television a few hours previously. He describes an odd fluttering sensation in his chest with mild dyspnoea but no chest pain. He denies having experienced this before. On systems review, he also complains of severe muscle cramps and a slight tremor in his hands over the last few days. His past medical history includes hypertension and gout for which he takes amlodipine and allopurinol. He denies any history of exertional dyspnoea but does occasionally get central chest pain on exertion for which he has not sought help. He has recently been diagnosed with small cell lung cancer and underwent his first round of chemotherapy last week; although he is unsure which drugs are being used. He used to smoke a pipe until his recent diagnosis of cancer and drinks a few measures of whisky most evenings.

On examination, his respiratory rate is 22 breaths/min and his oxygen saturations are 96% breathing two litres of oxygen. His heart rate is irregularly irregular and approximately 130 beats/min, his blood pressure is 152/78 mmHg. An ECG shows atrial fibrillation with no ischaemic changes.

What is the most likely cause for his new atrial fibrillation?

	Ischaemic heart disease
	Chemotherapy induced hypokalaemia
	Chemotherapy induced hypomagnesaemia
	Chemotherapy induced cardiomyopathy
	Alcohol

Dashboard

Overall score: 0%

1 -

Question 51 of 193

□ □

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	Chemotherapy induced hypokalaemia
	Chemotherapy induced hypomagnesaemia
	Chemotherapy induced cardiomyopathy
	Alcohol

Dashboard

Overall score: **0%**

1 -

Question 52 of 193



A 70-year-old male presents back to hospital 3 weeks after undergoing a primary percutaneous coronary intervention for anterior STEMI. He reports 24 hour history of increasing shortness of breath, fever over 39 degrees and pleuritic chest pain, different from the pain he reported when he initially presented with his ischaemic chest pain. On examination, his calves are soft, his heart sounds are normal with no added sounds and his lungs are clear on auscultation. His serum tests reveals a mildly raised troponin and ECG that demonstrates ST elevation in V2 to V4 but no reciprocal change. Angiography was performed again, demonstrating good radiological flow with no evidence of stent thrombosis. An transthoracic echocardiogram demonstrates a mild to moderate pericardial effusion with no tamponade. What is the optimal initial treatment?

	Aspirin, clopidogrel, low molecular weight heparin as per acute coronary syndrome protocol
	Fondaparinux
	Bivaluridin
	Oral prednisolone
	Oral ibuprofen

Dashboard

Overall score: 0%

1 -

□ Question 52 of 193

□ □

A 70-year-old male presents back to hospital 3 weeks after undergoing a primary percutaneous coronary intervention for anterior STEMI. He reports 24 hour history of increasing shortness of breath, fever over 39 degrees and pleuritic chest pain, different from the pain he reported when he initially presented with his ischaemic chest pain. On examination, his calves are soft, his heart sounds are normal with no added sounds and his lungs are clear on auscultation. His serum tests reveals a mildly raised troponin and ECG that demonstrates ST elevation in V2 to V4 but no reciprocal change. Angiography was performed again, demonstrating good radiological flow with no evidence of stent thrombosis. An transthoracic echocardiogram demonstrates a mild to moderate pericardial effusion with no tamponade. What is the optimal initial treatment?

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	Fondaparinux
	Bivaluridin
	Oral prednisolone
	Oral ibuprofen

Dashboard

Overall score: 0%

1 -

Question 53 of 193

A 65-year-old gentleman with hypertension is seen in general practice after an ambulatory blood pressure monitor revealed a daytime average blood pressure of 155/98mmHg. He is currently taking ramipril and amlodipine at optimal doses with good compliance. Which drug therapy should be added?

<input type="checkbox"/>	Bendroflumethiazide
<input type="checkbox"/>	Spironolactone
<input type="checkbox"/>	Doxazosin
<input type="checkbox"/>	Indapamide
<input type="checkbox"/>	Bisoprolol

Dashboard

Overall score: **0%**

1 -

□ Question 53 of 193

□ □

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Dashboard

Overall score: **0%**

1 -

Question 53 of 193

□ □

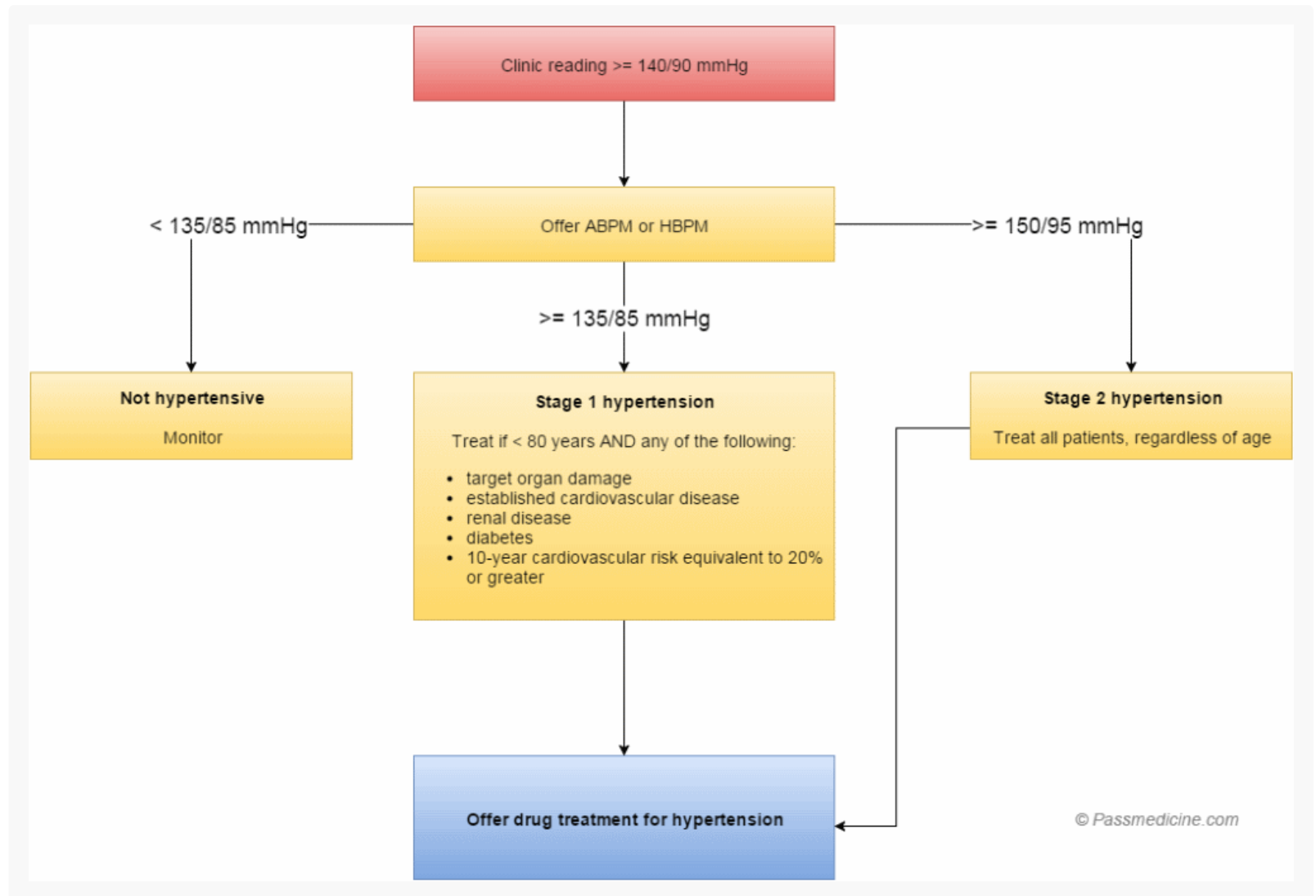
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Dashboard

Overall score: **0%**

1 -



□ Question 53 of 193

□ □

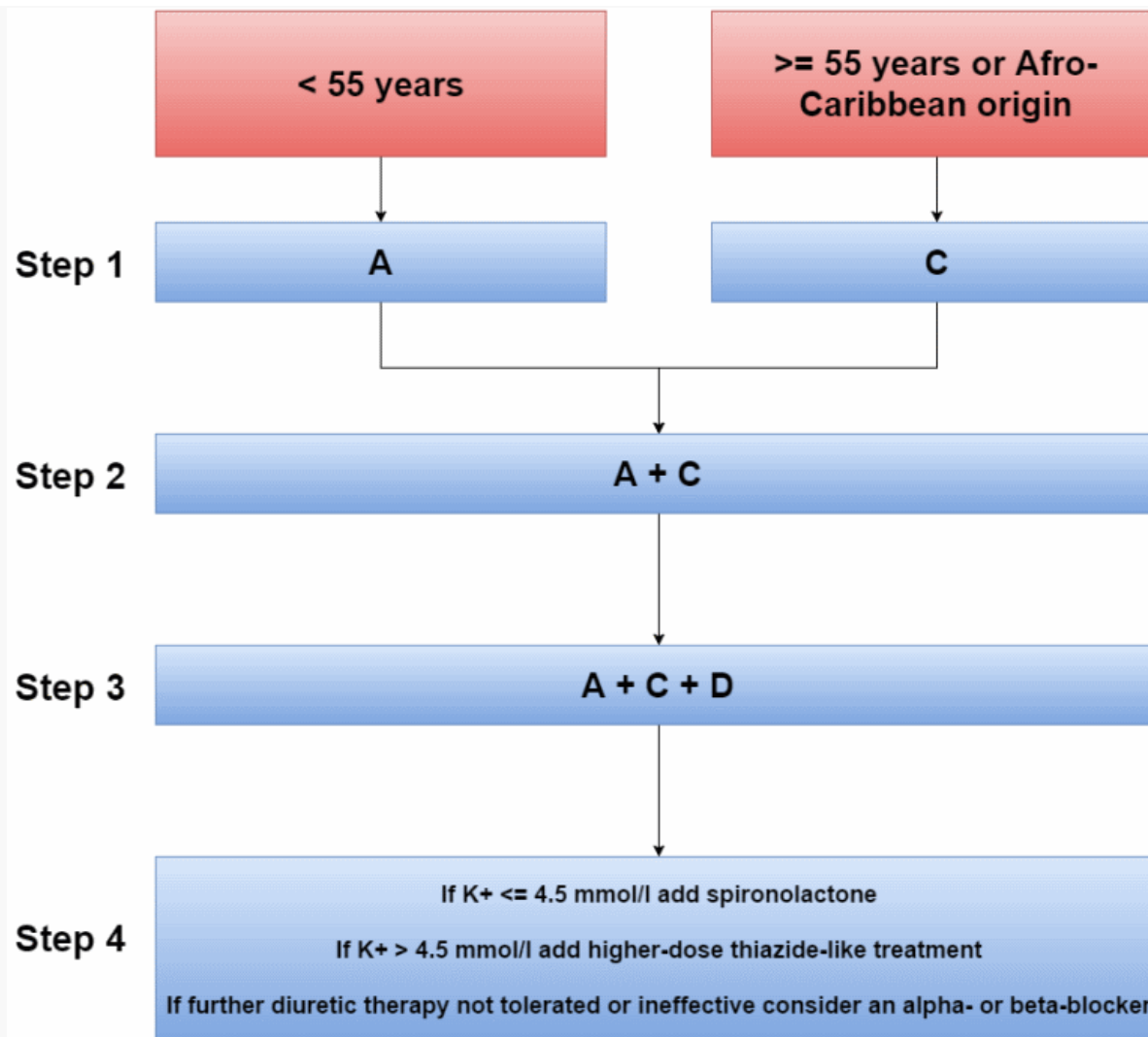
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	Spironolactone
	Doxazosin
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	Bisoprolol

Dashboard

Overall score: 0%

1 -



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Key

A = ACE inhibitor

C = Calcium channel blocker

D = Thiazide Diuretic

Question 54 of 193



A 55-year-old man presents for review in cardiology clinic for his angina pectoris. He developed exertional chest pain two years ago and has been managed medically since that point with GTN, aspirin, atorvastatin and atenolol. He finds that he is unable to manage his angina and frequently needs the use of his GTN spray, which causes him headaches. He has a past medical history of gout and depression as well. He works as a paralegal and has quit smoking successfully five months ago. He is keen to better control the pain.

What is the most appropriate management option?

	Add on nicorandil
	Add on long-acting nitrite
	Add on ivabradine
	Refer for coronary arterial bypass graft
	Add on calcium channel blocker

Dashboard

Overall score: 0%

1 -

Question 54 of 193

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Dashboard

Overall score: **0%**

1 -

□ Question 55 of 193



A 52-year-old man is asymptomatic but concerned about his risk of having a heart attack. His 58-year-old brother died of a myocardial infarction 2 months ago. He has a past medical history of hypertension, for which he takes perindopril and amlodipine. His sister takes tablets for diabetes and high blood pressure. He successfully quit smoking over 1 year ago and drinks approximately 2 units of alcohol per day.

On examination, his blood pressure is 130/70 mmHg and BMI is 32 kg/m².

Investigations:

haemoglobin	16g/dL (13-18)
mean corpuscular volume	90 fL (80-96)
serum cholesterol	5.0 mmol/L (<5.2)
serum LDL cholesterol	3.1 mmol/L (<3.36)
serum HDL cholesterol	1.55 mmol/L (>1.55)
fasting serum triglycerides	1.6 mmol/L (0.45-1.69)
haemoglobin A1c	5.4% (4.0-6.0)
serum aspartate aminotransferase	19 U/L (131)
plasma thyroid-stimulating hormone	2.4 mU/L (0.45-0)
estimated glomerular filtration rate (MDRD)	85 mL/min (>60)

His QRISK2 score estimates a 13% 10 year risk of myocardial infarction or stroke.

In addition to discussing lifestyle modifications, what treatment should you offer this patient?

	Aspirin

	Atorvastatin
	Indapamide
	Metformin
	Omega-3-polyunsaturated fatty acid supplements

Dashboard

Overall score: **0%**
1 -

Question 55 of 193



A 52-year-old man is asymptomatic but concerned about his risk of having a heart attack. His 58-year-old brother died of a myocardial infarction 2 months ago. He has a past medical history of hypertension, for which he takes perindopril and amlodipine. His sister takes tablets for diabetes and high blood pressure. He successfully quit smoking over 1 year ago and drinks approximately 2 units of alcohol per day.

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Aspirin

	Atorvastatin
	Indapamide
	Metformin
	Omega-3-polyunsaturated fatty acid supplements

Dashboard

Overall score: **0%**
1 -

Question 55 of 193

A 52-year-old man is asymptomatic of a myocardial infarction 2 years ago and amlodipine. His sister had a myocardial infarction 5 years ago and drinks approximately 10 units of alcohol per week.

On examination, his blood pressure is 130/80 mmHg.

Investigations:

haemoglobin

mean corpuscular volume

serum cholesterol

serum LDL cholesterol	3.1 mmol/L (<3.36)
serum HDL cholesterol	1.55 mmol/L (>1.55)
fasting serum triglycerides	1.6 mmol/L (0.45-1.69)
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estimated glomerular filtration rate (MDRD)	85 mL/min (>60)

His QRISK2 score estimates a 13% 10 year risk of myocardial infarction or stroke.

In addition to discussing lifestyle modifications, what treatment should you offer this patient?

Aspirin

Primary prevention

(10-year cardiovascular risk $\geq 10\%$ OR
most type 1 diabetics OR
CKD if eGFR $< 60\text{ml/min/m}^2$)



Atorvastatin 20mg od

(if non-HDL has not fallen by $\geq 40\%$ then
consider titrating up to 80mg)

	Atorvastatin
	Indapamide
	Metformin
	Omega-3-polyunsaturated fatty acid supplements

Dashboard

Overall score: **0%**
1 -

Question 56 of 193



A 13 year-old girl presents with chest pain and fever.

On examination the temperature is 38.1°C, heart rate is 90 beats/minute and respiratory rate is 18 breaths/minute. The chest is clear to auscultation. There is an early diastolic murmur at the left sternal edge.

ECG reveals sinus rhythm, PR interval 210ms.

Blood tests reveal:

Hb	121 g/l
Platelets	420 * 10 ⁹ /l
WBC	9.3 * 10 ⁹ /l
Na ⁺	136 mmol/l
K ⁺	3.7 mmol/l
Urea	3.8 mmol/l
Creatinine	72 µmol/l
Bilirubin	22 µmol/l
ALP	110 u/l
ALT	53 u/l
Albumin	36 g/l
C-reactive protein	36
Antistreptolysin O antibody titre	320 units/ml

Which other sign may also be present in this patient?

	Dermatitis herpetiformis
	Erythema marginatum
	Pyoderma gangrenosum
	Vitiligo
	Livedo reticularis

Dashboard

Overall score: **0%**

1 -

□ Question 56 of 193

□ □

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	Pyoderma gangrenosum
	Vitiligo
	Livedo reticularis

Dashboard

Overall score: **0%**

1 -

Question 56 of 193

A 13 year-old girl presents with chest pain and fever.

On examination the temperature is 38.1°C, heart rate 120 bpm, chest is clear to auscultation. There is an early diastolic murmur.

ECG reveals sinus rhythm, PR interval 210ms.

Blood tests reveal:

Hb	121 g/l
Platelets	420 * 10 ⁹ /l
WBC	9.3 * 10 ⁹ /l
Na ⁺	136 mmol/l
K ⁺	3.7 mmol/l
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	Pyoderma gangrenosum
	Vitiligo
	Livedo reticularis

Dashboard

Overall score: **0%**
1 -

□ Question 57 of 193



A 28-year-old lady pregnant lady of 37 weeks gestation presented to the Emergency Department a few hours earlier with new onset chest pain. The pain was sharp and made worse with inspiration. She also complained of rapid onset progressively increasing shortness of breath, affecting her ability to complete sentences. She denied the presence of a cough or sputum production and did not suffer from haemoptysis or calf pain. Other than a successful external cephalic version for a breech presentation five days ago and a placenta praevia which spontaneously resolved, her pregnancy was unremarkable. She was in good health with an unremarkable past medical history and normal routine investigations throughout her pregnancy. She smoked 15 cigarettes per day and did not consume alcohol. Her mother suffered from an unexplained deep vein thrombosis when she was 42 years old but otherwise her family history was unremarkable.

Initial examination revealed a heart rate of 122bpm, respiratory rate 24/min, oxygen saturations of 98% on air, a temperature of 37.6°C and a blood pressure of 112/72 mmHg. She was struggling to complete full sentences. Examination of her cardiorespiratory system revealed good air entry in both bases, a JVP of 3cm, the absence of pedal oedema and soft and non-tender calves. Examination of her gastrointestinal system was unremarkable and ultrasound auscultation revealed the presence of a fetal heartbeat.

As she was being tended to for initial investigations, her condition rapidly deteriorated. Her oxygen saturation dropped to 88% on air, and her blood pressure was recorded as 88/66mmHg. She appeared cool and clammy, and her respiratory rate increased to 32/min. The doctor tending to venepuncture noted the presence of oozing of blood from the wound. She was promptly transferred the intensive care unit and the following investigations were conducted:

Hb	101 g/l
Platelets	75 * 10 ⁹ /l
WBC	12.2 * 10 ⁹ /l

Na ⁺	136 mmol/l
K ⁺	4.8 mmol/l
Urea	14.1 mmol/l
Creatinine	158µmol/l

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INR	3.9
APTT	84 s
D-Dimer	2920 ng/ml

Urinalysis: ketones ++, leucocytes/nit/prot/blood/glucose negative

Portable chest x-ray: normal appearance of heart and lung fields

ECG: sinus tachycardia 148bpm, T wave inversion leads V3-V6

Arterial blood gases on air:

pH	7.48
PaO2	5.9 kPa
PaCO2	2.2 kPa
BE	1
HC03	24 mmol/l

She was commenced on 15 litres/min oxygen via non-rebreathe mask, and an arterial line and central venous line were sited, as well as the presence of two large bore peripheral cannulae. She was immediately commenced on 2 litres of Hartmann's solution stat.

What is the most likely diagnosis?

	Pulmonary embolus
	Septic shock
	Peripartum cardiomyopathy
	Aortic dissection
	Amniotic fluid embolus

Dashboard

Overall score: 0%

1 -

□ Question 57 of 193



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	Septic shock
	Peripartum cardiomyopathy
	Aortic dissection
	Amniotic fluid embolus

Dashboard
<div>Overall score: 0%</div> <div>1 -</div>

□ Question 58 of 193



A 72-year-old male smoker with a history of hypertension, heart failure and poorly controlled type 2 diabetes mellitus presents with sudden onset shortness of breath of a few hours duration. He describes this as a tight sensation in his chest and pain while trying to breathe. He is wheelchair bound due to weakness in both lower limbs and spends most of his time either lying in bed reading or sitting watching TV. He commenced a course of antibiotics for suspected lower limb cellulitis 3 days ago.

On examination, he has bilaterally reduced chest expansion. His lower limbs show evidence of pitting oedema up to the mid calves, which is more pronounced on the right side with a patch of dusky purple discolouration.

Lab reports reveal:

Hb	180 g/l
WBC	$10 \times 10^9/l$
Plt	$375 \times 10^9/l$
Urea	7.9 mmol/l
Creatinine	190 μ mol/l
Na+	133 mmol/l
K+	4.1 mmol/l
Albumin	28 g/l

Urine routine examination showed proteinuria 2+

ECG shows sinus tachycardia.

Chest X-ray shows clear lung fields with no mass lesion.

Which is the most appropriate next diagnostic investigation?

--	--

	D-dimer assay
	CT pulmonary angiography
	Ventilation-perfusion scan
	Right heart catheterization
	Pulmonary arteriography

Dashboard

Overall score: **0%**

1 -

□ Question 58 of 193



A 72-year-old male smoker with a history of hypertension, heart failure and poorly controlled type 2 diabetes mellitus presents with sudden onset shortness of breath of a few hours duration. He describes this as a tight sensation in his chest and pain while trying to breathe. He is wheelchair bound due to weakness in both lower limbs and spends most of his time either lying in bed reading or sitting watching TV. He commenced a course of antibiotics for suspected lower limb cellulitis 3 days ago.

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ECG shows sinus tachycardia.

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Which is the most appropriate next diagnostic investigation?

--	--

	D-dimer assay
	CT pulmonary angiography
	Ventilation-perfusion scan
	Right heart catheterization
	Pulmonary arteriography

Dashboard

Overall score: **0%**
1 -

Question 58 of 193

A 72-year-old male smoker with a history of hypertension, heart failure, and peripheral vascular disease presents with sudden onset shortness of breath of a few hours duration, chest pain while trying to breathe. He is wheelchair bound and has been in bed for his time either lying in bed reading or sitting watching TV. He had a right lower limb cellulitis 3 days ago.

On examination, he has bilaterally reduced chest expansion. He has a tachycardia and a clear lung fields. There is a 2+ pitting oedema in the mid calves, which is more pronounced on the right side with a 3+ pitting oedema in the lower legs.

Lab reports reveal:

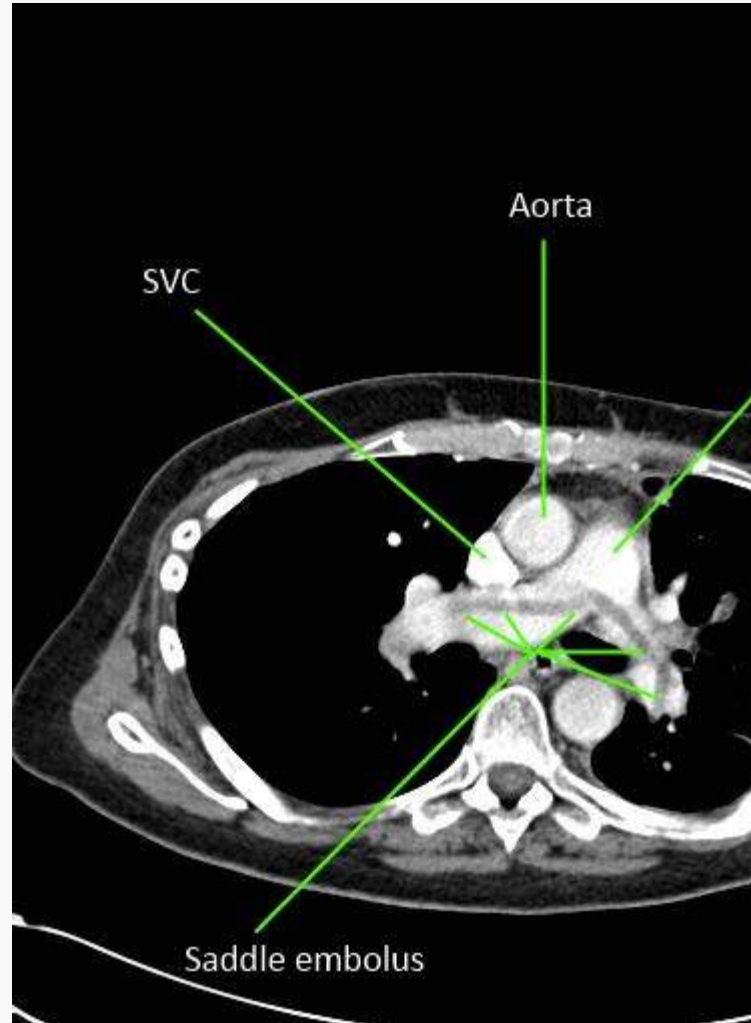
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ECG shows sinus tachycardia.

Chest X-ray shows clear lung fields with no mass lesion.

Which is the most appropriate next diagnostic investigation?



	D-dimer assay
	CT pulmonary angiography
	Ventilation-perfusion scan
	Right heart catheterization
	Pulmonary arteriography

Dashboard

Overall score: **0%**
1 -

□ Question 58 of 193



A 72-year-old male smoker with a history of hypertension, heart failure and poorly controlled type 2 diabetes mellitus presents with sudden onset shortness of breath of a few hours duration. He describes this as a tight sensation in his chest and pain while trying to breathe. He is wheelchair bound due to weakness in both lower limbs and spends most of his time either lying in bed reading or sitting watching TV. He commenced a course of antibiotics for suspected lower limb cellulitis 3 days ago.

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	Right heart catheterization
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Dashboard

Overall score: **0%**
1 -

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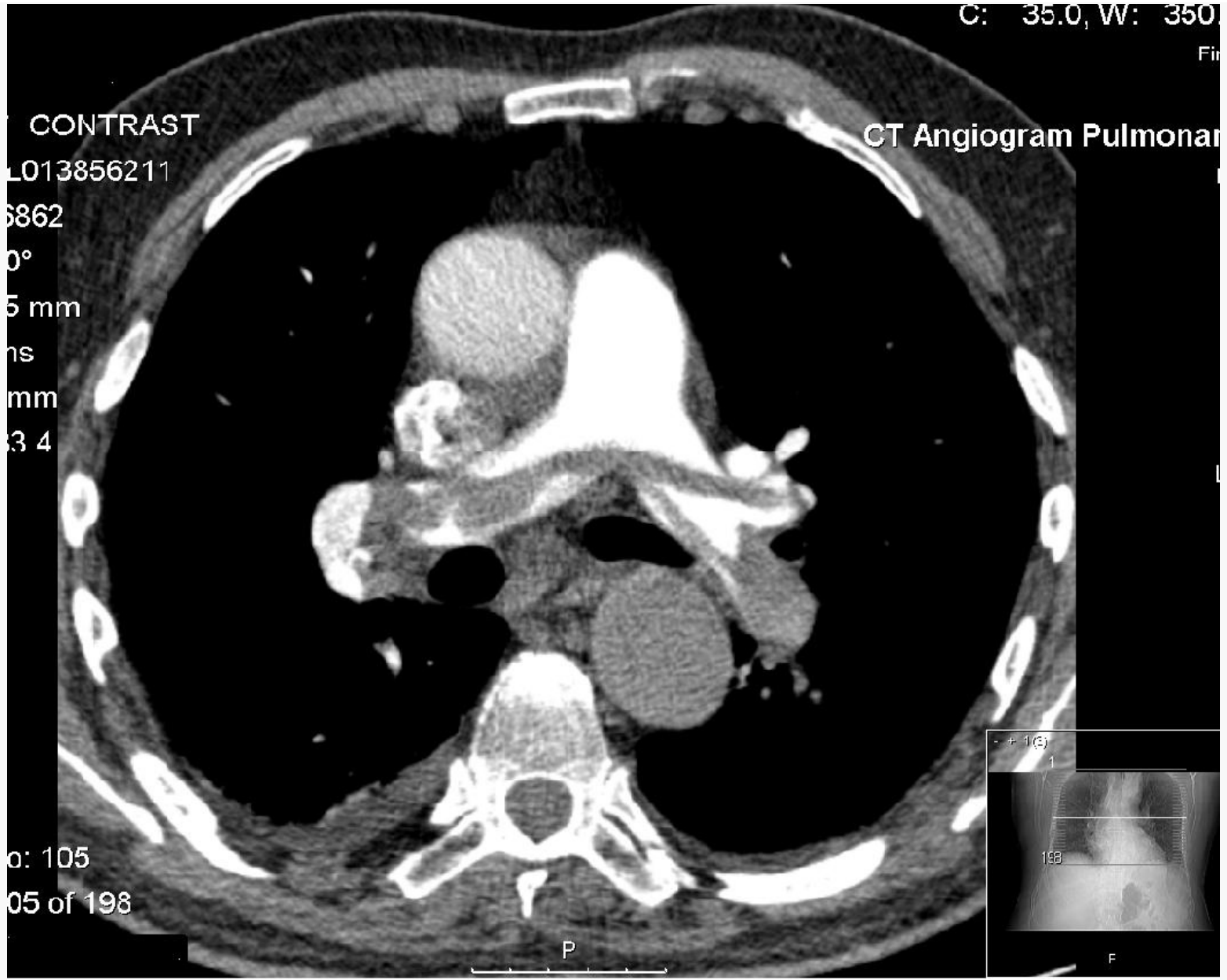
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Question 59 of 193

□ □

A 72-year-old gentleman is admitted with syncope and palpitations. He is known to have atrial fibrillation and is on flecainide and warfarin. His past medical history also includes benign prostatic hypertrophy and essential thrombocytosis.

His other medications include tiotropium 18 micrograms OD, tamsulosin 400 micrograms OD, ramipril 2.5mg and simvastatin 40mg. He has recently stopped a tablet due to shortness of breath but cannot remember what it was.

On arrival, he is tachycardic with a heart rate of 215 /min. He is alert. He denies chest pain but is aware of some shortness of breath. He is attached to a 3-lead cardiac monitor which shows a narrow complex tachycardia of 210-220 beats per minute. It is difficult to tell on the monitor however it appears regular. A 12-lead ECG confirms a regular narrow complex tachycardia with a ventricular rate of 215/min.

What is the most likely diagnosis?

	Atrial fibrillation
	Atrial flutter with 1:1 conduction
	Atrial flutter with variable conduction
	Atrio-ventricular re-entry tachycardia (AVRT)
	Atrio-ventricular nodal re-entry tachycardia (AVNRT)

Dashboard

Overall score: 0%

1 -

Question 59 of 193

□ □

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Dashboard

Overall score: **0%**

1 -

Question 60 of 193

□ □

A 63-year-old female patient attends the Emergency Department with crushing central chest pain and 3mm ST segment elevation in leads II, III and aVF. She is taken to the cardiac catheter laboratory where she has a primary PCI with a satisfactory angiographic result.

Six hours later, whilst on CCU, she develops complete heart block. The patient is asymptomatic and her haemodynamic parameters are as follows:

Pulse 44bpm, regular

Blood pressure - 123/75mmHg

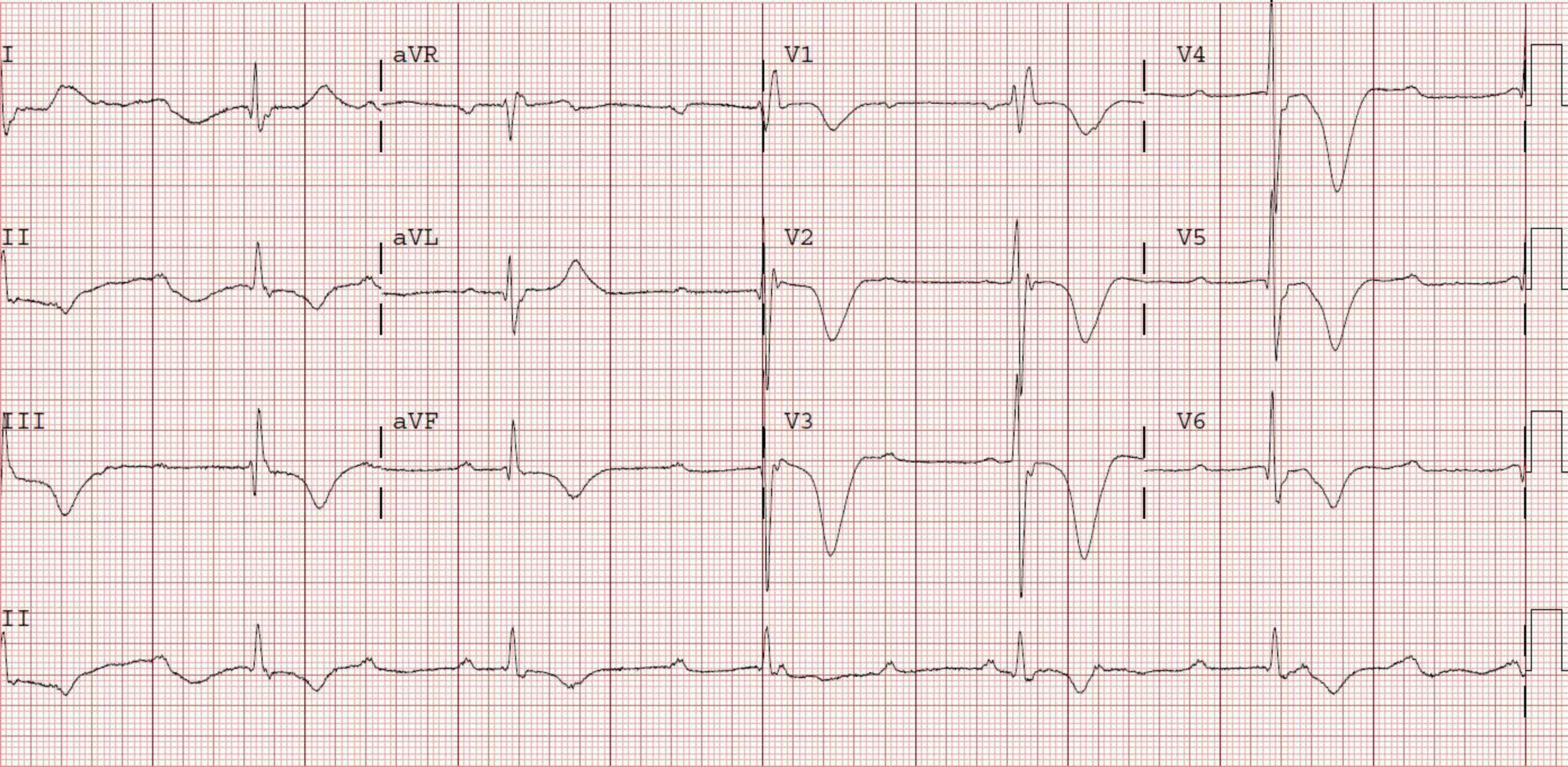
What is the most appropriate course of action?

<input type="checkbox"/>	Synchronised direct current cardioversion (DCCV)
<input type="checkbox"/>	Continue close monitoring and observation of the patient
<input type="checkbox"/>	Start an infusion of isoprenaline
<input type="checkbox"/>	Insertion of a permanent pacemaker
<input type="checkbox"/>	Insertion of a temporary pacing wire

Dashboard

Overall score: 0%

1 -



Question 60 of 193

□ □

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	Insertion of a permanent pacemaker
	Insertion of a temporary pacing wire

Dashboard

Overall score: **0%**

1 -

□ Question 61 of 193



A 66-year-old gentleman presented to the Emergency Department complaining of severe abdominal pain for the last day. The pain occurred immediately after he ate, and he described it as an excruciating pain in the central of his abdomen. It lessened during periods of starvation, and a few hours ago passed dark red blood within his stools on one occasion, leading to his admission. His bowels were otherwise normal and prior to the pain had been relatively well in himself. In addition, he had been feeling unwell for the last couple of days, complaining of night sweats and tiredness. His past medical history comprised angina which had been confirmed three days ago upon undergoing a coronary angiogram which demonstrated diffuse triple vessel disease. In addition, he had a past medical history of hypertension, hypercholesterolaemia and COPD. He smoked 30 cigarettes per day for 25 years and did not consume alcohol and was taking amlodipine 5mg OD, ramipril 7.5mg OD, bisoprolol 2.5mg OD, atorvastatin 20mg OD, beclometasone 200mcg BD & salbutamol PRN.

Examination revealed an obese gentleman with a temperature of 37.6°C, a heart rate of 118bpm, respiratory rate of 18/min and blood pressure of 142/82 mmHg. Examination of his cardiovascular and respiratory systems revealed the absence of his pedal pulses bilaterally, with no evidence of ulceration or gangrene. A purpuric rash was noted on both halluxes.

Initial investigations revealed the following results:

Hb	122 g/l
Platelets	132 * 10 ⁹ /l
WBC	11.2 * 10 ⁹ /l
Eosinophils	0.6 * 10 ⁹ /l
ESR	52 mm/hr

Na ⁺	136 mmol/l
K ⁺	5.8 mmol/l
Urea	13.3 mmol/l
Creatinine	158 µmol/l

CRP	38 mg/l

Urinalysis protein +, otherwise nil else

ECG: heart rate 118bpm sinus tachycardia, Q waves II/III/aVR

Blood results 4 weeks ago (done by GP when titrated ramipril)

Na ⁺	142 mmol/l
K ⁺	4.8 mmol/l
Urea	6.6 mmol/l
Creatinine	86 µmol/l

Which one of the following is the most likely diagnosis?

	Contrast induced nephropathy
	Cholesterol atheroemboli
	Polyarteritis nodosa
	Infective endocarditis
	Microscopic polyangiitis

Dashboard

Overall score: **0%**

1 -

□ Question 61 of 193



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Dashboard

Overall score: **0%**

1 -

□ Question 62 of 193

□ □

An 87 year old gentleman is reviewed in the cardiology clinic. He has unstable angina with multiple confluent lesions in all three main coronary vessels and in major tributaries on angiography. The lesions are not amenable to stenting or bypass. On assessment in the clinic the blood pressure is 104/43mmHg, heart rate is 57bpm. His ECG confirms atrial fibrillation but no new ischaemic changes. There is no clinical sign of heart failure. He is currently taking aspirin, bisoprolol, ramipril, isosorbide mononitrate, nicorandil and simvastatin. His main symptom is chest pain on minimal exertion.

Which of the following is the most appropriate drug to control this patients angina?

	Diltiazem
	Digoxin
	Ivabradine
	Omega 3
	Ranolazine

Dashboard

Overall score: 0%

1 -

Question 62 of 193

□ □

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Dashboard

Overall score: **0%**

1 -

Question 63 of 193

□ □

A 58-year-old female reports having symptomatic episodes of palpitations for the last six months. She is normally fit and drinks the occasional small glass of red wine when she goes out for a meal. The last episode was four days ago when she was cooking in her kitchen. She describes that she felt light headed with central chest discomfort that eased after twenty minutes. In clinic, her observations are all stable and an initial twelve lead electrocardiogram shows sinus rhythm.

What would be the investigation of choice?

	24 hour ambulatory electrocardiogram
	Electrocardiogram treadmill test
	24 hour blood pressure
	72 hour ambulatory electrocardiogram
	Event recorder electrocardiogram

Dashboard

Overall score: 0%

1 -

Question 63 of 193

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	72 hour ambulatory electrocardiogram
	Event recorder electrocardiogram

Dashboard

Overall score: **0%**

1 -

□ Question 64 of 193

□ □

A 50 year old Caucasian female on holiday from Australia presents to the walk-in urgent care centre with four day history of left sided temporal headache, which is persistent and of gradual onset. In addition, she complains of double vision as well. She is known to have migraines but is relatively well-controlled. She is normally independent with no significant family history. She takes no regular medications except the oral contraceptive pill. On examination, you note a left sided loss of the afferent papillary reflex. She also has a loss of vertical gaze and is unable to adduct her left eye. She has a reduced sensation to light touch on the left forehead and cheek, not crossing the midline. What is the diagnosis?

	Left space-occupying lesions
	Multiple sclerosis
	Right MCA territory ischaemic infarct
	Cavernous sinus thrombosis
	Migraine with aura

Dashboard

Overall score: 0%

1 -

□ Question 64 of 193

□ □

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Dashboard

Overall score: **0%****1** -

□ Question 64 of 193

□ □

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Dashboard

Overall score: 0%

1 -

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Se: 3/3
Im: 13/16
Ax: 1468.0

Acc:

Acq Tm: 09:31:29.550

BrainPLAIN.V.CONT
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120.0 kV
200.0 mA
10.0 mm/0.0:1
Tilt: 0.0
1.5 s
Lin:DCM / Lin:DCM / Id:ID
W:80 L:40

P

DFOV: 21.5 x 19.7cm



□ Question 65 of 193

□ □

A 67-year-old with a history of ischaemic heart disease (primary percutaneous intervention for a STEMI three years ago) is admitted with a pyrexia of unknown origin. On examination his pulse is 96/min, temperature 38.2°C and blood pressure 104/66 mmHg. A systolic murmur is noted but auscultation of the chest is unremarkable. His post-myocardial infarction echocardiogram three years ago showed no valvular disease. Chest x-ray is normal and urine dipstick shows blood ++. A petechial rash is noted on his hands and legs. A presumptive diagnosis of infective endocarditis is made and empirical treatment with IV amoxicillin and gentamicin given. Two days later blood cultures show a coagulase-negative staphylococcus. What is the most appropriate action with respect to antibiotic therapy?

	Switch to flucloxacillin
	Switch to flucloxacillin + vancomycin + rifampicin
	Make no changes to treatment
	Switch to flucloxacillin + vancomycin
	Switch to flucloxacillin + rifampicin

Dashboard

Overall score: 0%

1 -

Question 65 of 193

□ □

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	Make no changes to treatment
	Switch to flucloxacillin + vancomycin
	Switch to flucloxacillin + rifampicin

Dashboard

Overall score: **0%**

1 -

Question 66 of 193

A 26-year-old patient comes into the Emergency Department in cardiac arrest. The paramedics tell you that she was pulled out of a lake by friends after she had suddenly become unresponsive while swimming. Her friends started cardiopulmonary resuscitation (CPR) at the scene. On arrival, the paramedics noted that the patient was in Ventricular Fibrillation (VF). The patient was defibrillated, given IV amiodarone and adrenaline. Her friends tell you she has no significant past medical history and was always fit and well until this point.

Despite continued attempts to resuscitate the patient, she dies in the Emergency Department. A post-mortem is carried out which is normal.

What is the most likely diagnosis?

	Hypertrophic Obstructive Cardiomyopathy (HOCM)
	Long QT1 Syndrome
	Long QT3 Syndrome
	Right Arrhythmogenic Ventricular Dysplasia (RAVD)
	Wolf-Parkinson White Syndrome

Dashboard

Overall score: 0%

1 -

Question 66 of 193

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	Long QT1 Syndrome
	Long QT3 Syndrome
	Right Arrhythmogenic Ventricular Dysplasia (RAVD)
	Wolf-Parkinson White Syndrome

Dashboard

Overall score: 0%

1 -

Question 67 of 193

A 23-year-old woman presents to cardiology clinic with exercise induced shortness of breath. She has no previous medical history and has noticed progression of her symptoms over the last six months. She has a family history of sudden cardiac death on her father's side of the family. She has had an echocardiogram which demonstrated left ventricular thickness of 15mm, and a left ventricular outflow gradient of 53mmHg. How should her risk of left ventricular tract obstruction be assessed?

<input type="checkbox"/>	Cardiac MRI
<input type="checkbox"/>	Angiogram
<input type="checkbox"/>	Transesophageal echocardiogram
<input type="checkbox"/>	Exercise stress echocardiogram
<input type="checkbox"/>	No further tests needed

Dashboard

Overall score: 0%

1 -

Question 67 of 193

□ □

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	Cardiac MRI
	Angiogram
	Transesophageal echocardiogram
	Exercise stress echocardiogram
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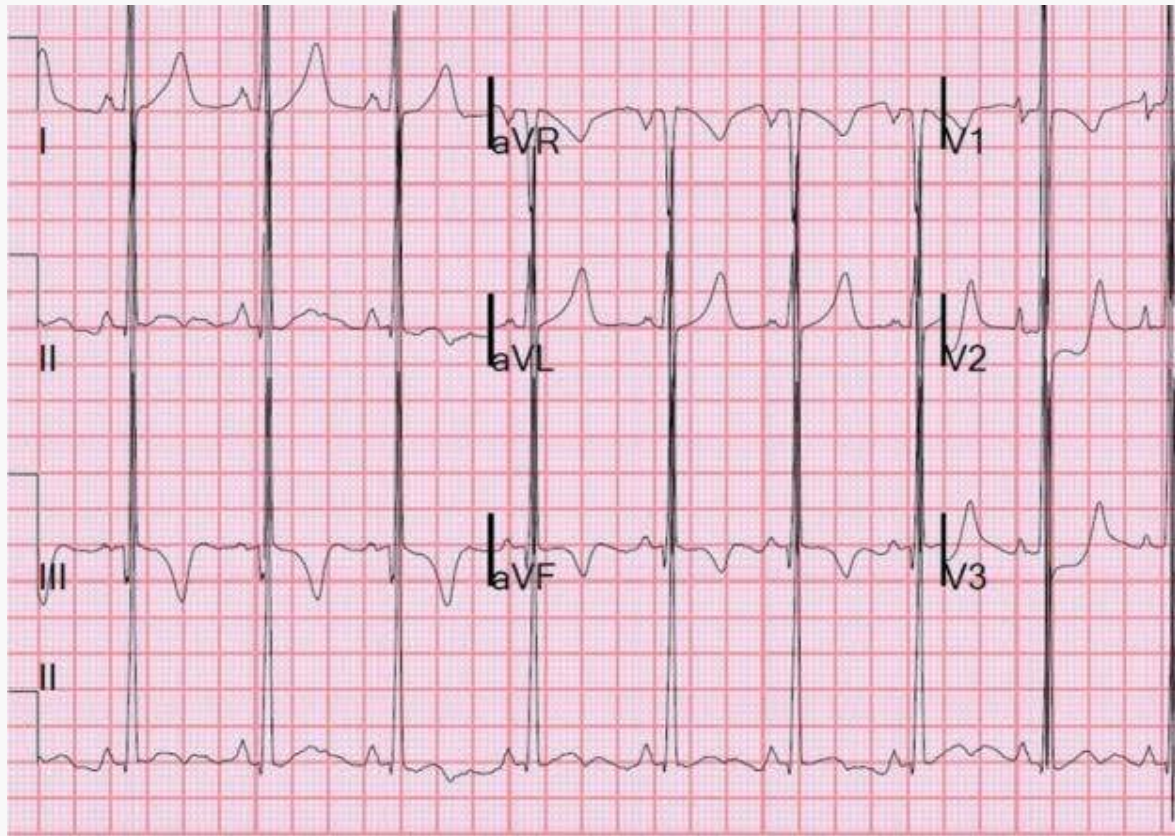
Dashboard

Overall score: **0%**

1 -

Question 67 of 193

A 23-year-old woman presents with a family history of sudden cardiac death on her father's side. She has a normal echocardiogram with a left ventricular thickness of 15mm. Which of the following tests would best assess for aortic dissection?



<input type="checkbox"/>	Cardiac MRI
<input type="checkbox"/>	Angiogram
<input type="checkbox"/>	Transesophageal echocardiogram
<input checked="" type="checkbox"/>	Exercise stress echocardiogram
<input type="checkbox"/>	No further tests needed

Dashboard

Overall score: **0%**

1 -

Question 68 of 193



An 82-year-old presents with suprapubic discomfort. He reports urgency but has been unable to pass any urine for over 24 hours. Three months ago, he underwent a third failed transurethral resection of the prostate for benign prostatic hypertrophy (PSA was normal). His past medical history includes hypertension, type 2 diabetes mellitus, chronic kidney disease (baseline creatinine 150 $\mu\text{mol/l}$) previous MI in 2007 and 2010. He remains relatively active, with an exercise tolerance of 500 yards. On examination, his mucous membranes are moist, his peripheries are warm and his JVP at 3 cm above the angle of Louis. His heart sounds and chest are unremarkable. His abdomen is tender and distended in the suprapubic region. On insertion of a urethral catheter, 900mls of residual urine is noted. His blood tests are as follows:

Hb	115 g/l
Platelets	$282 \times 10^9/\text{l}$
WBC	$6.8 \times 10^9/\text{l}$

Na^+	144 mmol/l
K^+	5.8 mmol/l
Urea	12.1 mmol/l
Creatinine	201 $\mu\text{mol/l}$
Troponin T	0.08 (normal <0.03)

His ECG demonstrates left bundle branch block (old) and first-degree heart block at a rate of 49 beats/ minute and regular. What is the appropriate management?

<input type="checkbox"/>	Treat as acute coronary syndrome only
<input type="checkbox"/>	Intravenous fluids only
<input type="checkbox"/>	Monitor renal function and consider long term catheter only
<input type="checkbox"/>	Treat as acute coronary syndrome, monitor renal function and consider long term catheter

	Treat as acute coronary syndrome, intravenous fluids, monitor renal function and consider long term catheter
--	--

Dashboard

Overall score: **0%**

1 -

Question 68 of 193



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	Intravenous fluids only
	Monitor renal function and consider long term catheter only
	Treat as acute coronary syndrome, monitor renal function and consider long term catheter

	Treat as acute coronary syndrome, intravenous fluids, monitor renal function and consider long term catheter
--	--

Dashboard

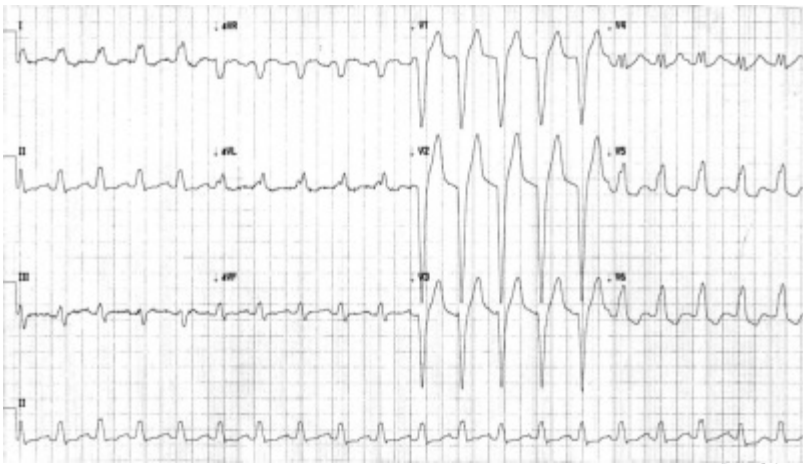
Overall score: **0%**

1 -

Question 69 of 193

A 72-year-old woman presents with palpitations. Her past medical history includes ischaemic heart disease and chronic obstructive pulmonary disease. Her pulse is 120/min, blood pressure 110/76 mmHg and the chest is clear on auscultation.

The ECG is shown below:



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What is shown on the ECG?

	Left bundle branch block
	Anterior ST elevation myocardial infarction
	Right bundle branch block
	Broad complex tachycardia
	Atrial flutter

Dashboard

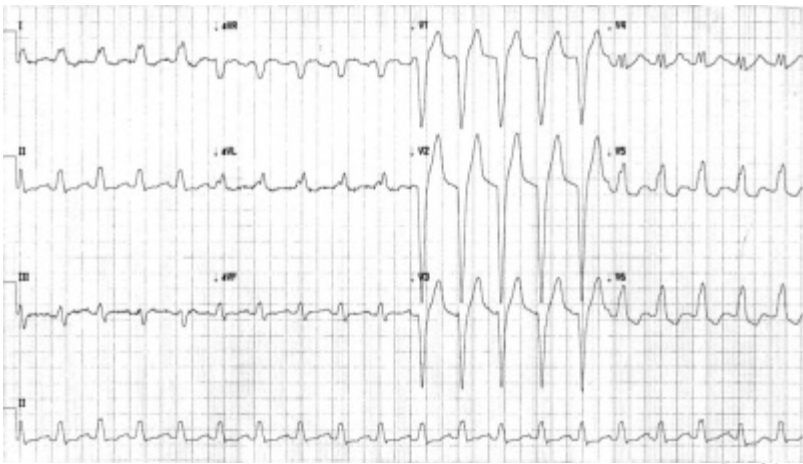
Overall score: **0%**

1 -

Question 69 of 193

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What is shown on the ECG?

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	Right bundle branch block
	Broad complex tachycardia
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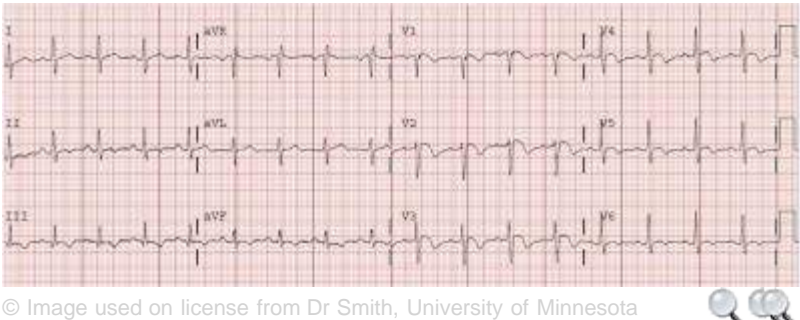
Dashboard

Overall score: **0%**

1 -

Question 70 of 193

A 35-year-old man presents to his GP with a five day history of dyspnoea, cough, chest pain and palpitations. He describes the chest pain as being worse when he takes a deep breath in and the only relieving factor is ibuprofen. There has been no sputum production or haemoptysis. He has no significant past medical history of note. On examination his pulse is 102/min, blood pressure is 124/78 mmHg and oxygen saturations are 95% on room air. Auscultation of his chest is normal. An ECG is taken:



What is the most likely diagnosis?

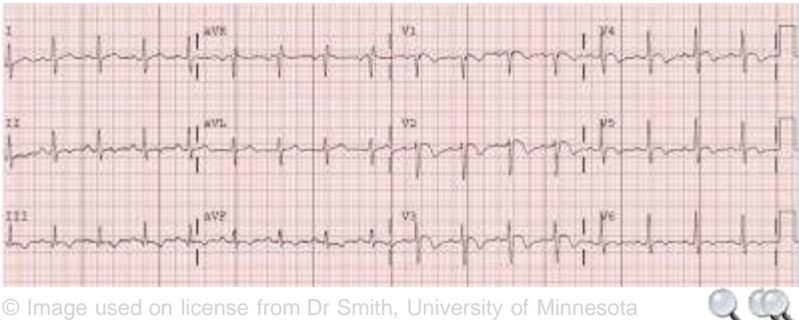
	Pulmonary embolism
	Acute coronary syndrome
	Pericarditis
	Musculoskeletal chest pain
	Viral pleurisy

Overall score: **0%**

1 -

Question 70 of 193

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Overall score: **0%**

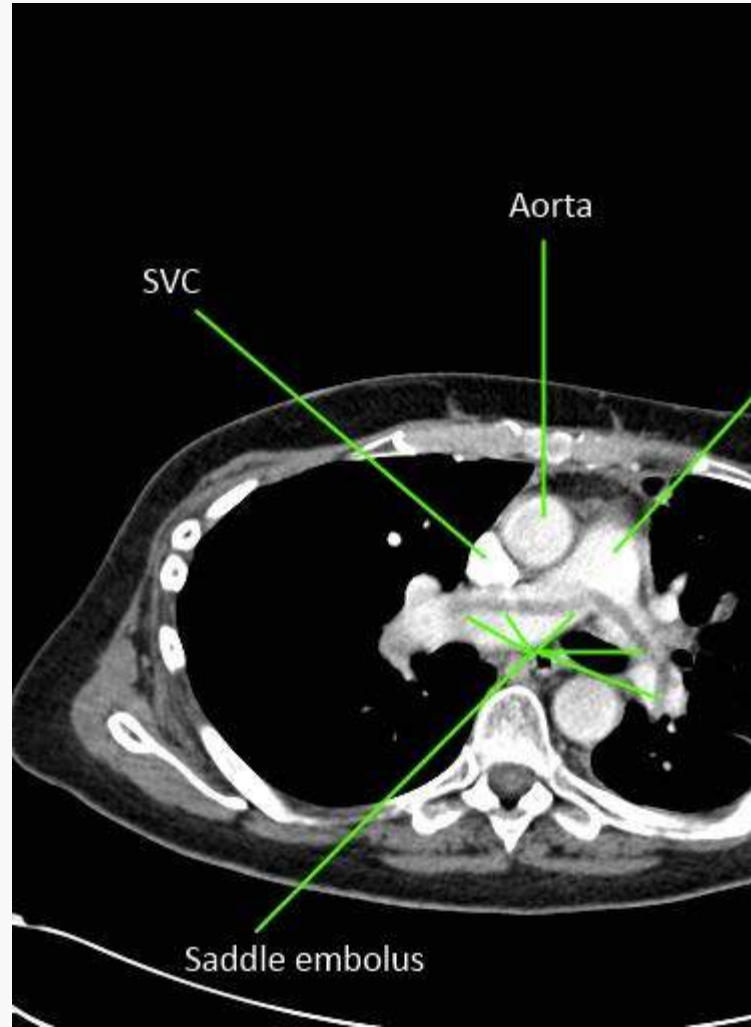
1 -

Question 70 of 193

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	Pulmonary embolism
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	Pericarditis
	Musculoskeletal chest pain
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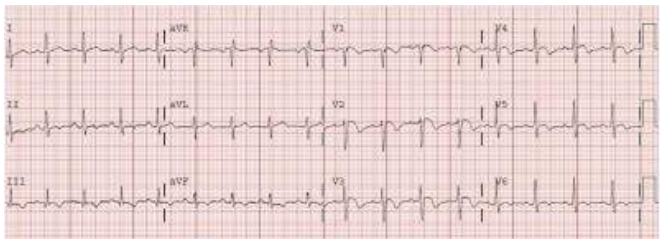
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Question 70 of 193

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	Acute coronary syndrome
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	Musculoskeletal chest pain
	Viral pleurisy

Dashboard

Overall score: 0%

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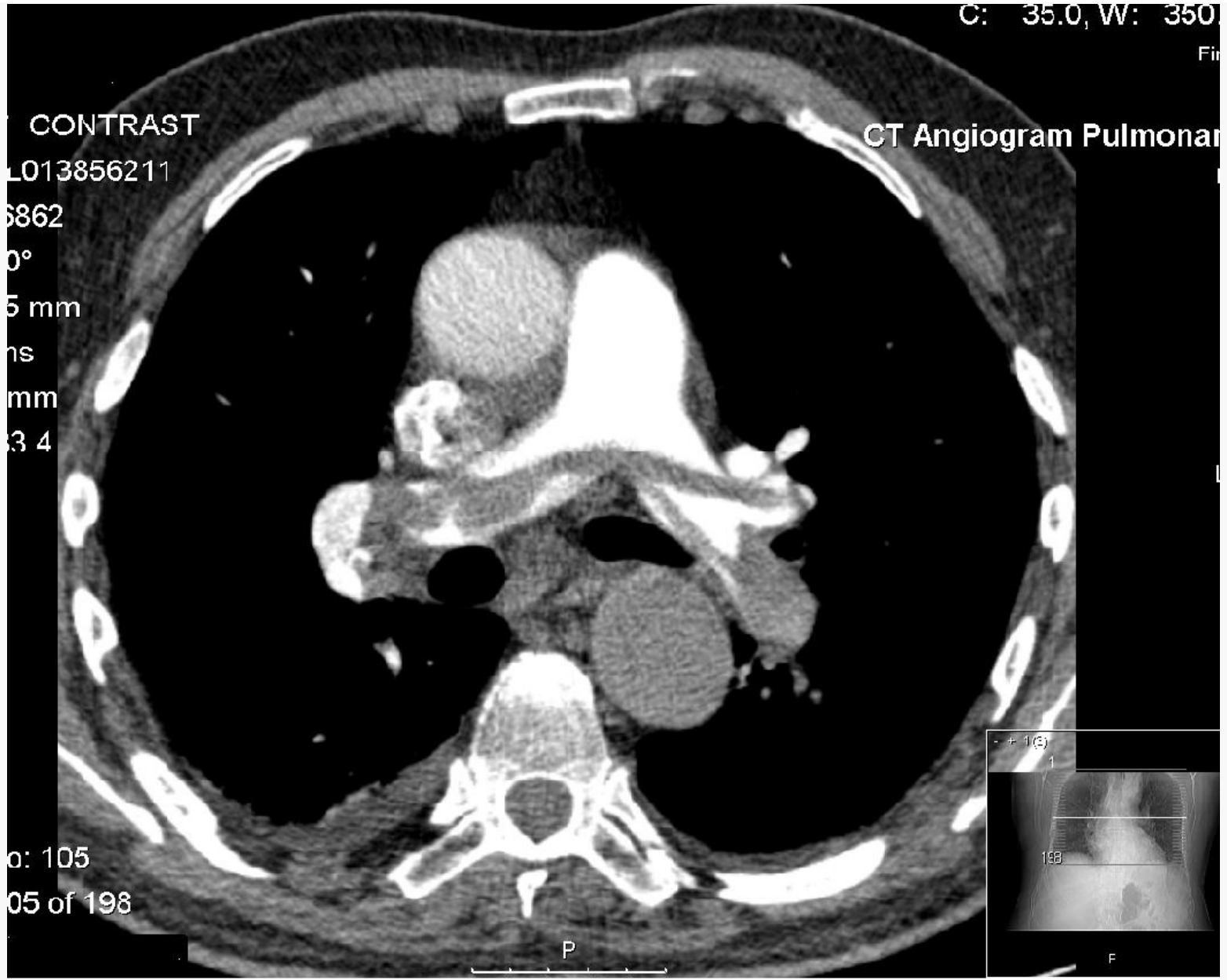
05 of 198

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Question 71 of 193



A 23-year-old woman presents with chest pain. It progressed over an hour whilst at home and watching television. She describes it as sharp in nature and rates it seven out of ten in severity. She has not had any pain similar to this before but is concerned as she thinks it might be a pulmonary embolus. She was warned to monitor for symptoms of a pulmonary embolism two years ago when she was diagnosed with a right sided deep vein thrombosis in her right popliteal vein. The deep vein thrombosis was attributed to use of the oral contraceptive pill; this was stopped and she was treated with warfarin for three months. She has had no more clots as far as she is aware since then. She is currently taking no regular medications but has found that ibuprofen significantly helps with her chest pain. She has recently had coryzal symptoms.

On examination, she appears comfortable, but she has recently had 400mg of ibuprofen. Her observations show a heart rate of 76/min, respiratory rate of 14/min, a temperature of 38.2°C and a blood pressure of 123/75mmHg. An ECG shows widespread ST-elevation and PR depression. Blood tests are pending and an echocardiogram is requested. She is suspected of having acute pericarditis. What would indicate a poor prognosis?

	Fever
	ST elevation on ECG
	PR depression on ECG
	Improvement with ibuprofen
	Elevated inflammatory markers

Dashboard

Overall score: 0%

1 -

Question 71 of 193



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	Fever
	ST elevation on ECG
	PR depression on ECG
	Improvement with ibuprofen
	Elevated inflammatory markers

Dashboard

Overall score: 0%

1 -

Question 72 of 193

A 45-year-old male is referred to the rapid access chest pain clinic with symptoms typical of angina. He is a non-smoker and has no past medical history. Based on his sex, age and risk factors he is estimated to have a 51% chance of having underlying coronary artery disease. According to the NICE guidelines, which is the most appropriate investigation?

<input type="checkbox"/>	Treadmill ECG
<input type="checkbox"/>	Trans-thoracic echocardiogram
<input type="checkbox"/>	CT-coronary angiography
<input type="checkbox"/>	Nuclear perfusion stress test
<input type="checkbox"/>	Diagnostic coronary angiography

Dashboard

Overall score: **0%**

1 -

Question 72 of 193



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	Treadmill ECG
	Trans-thoracic echocardiogram
	CT-coronary angiography
	Nuclear perfusion stress test
	Diagnostic coronary angiography

Dashboard

Overall score: **0%**

1 -

Question 73 of 193

□ □

A 54-year-old man with a known diagnosis of Klinefelter's syndrome is referred to clinic with symptoms of palpitations, fatigue and dyspnoea.

On examination, the patient is tall, and has gynaecomastia. Auscultation of the precordium reveals normal heart sounds, but there is a late systolic crescendo-decrescendo murmur heard loudest at the lower left sternal edge.

What is the likely diagnosis?

	Tricuspid regurgitation
	Mitral valve prolapse
	Bicuspid aortic valve
	Pulmonary hypertension
	Mitral regurgitation

Dashboard

Overall score: **0%**

1 -

Question 73 of 193

□ □

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	Pulmonary hypertension
	Mitral regurgitation

Dashboard

Overall score: **0%**

1 -

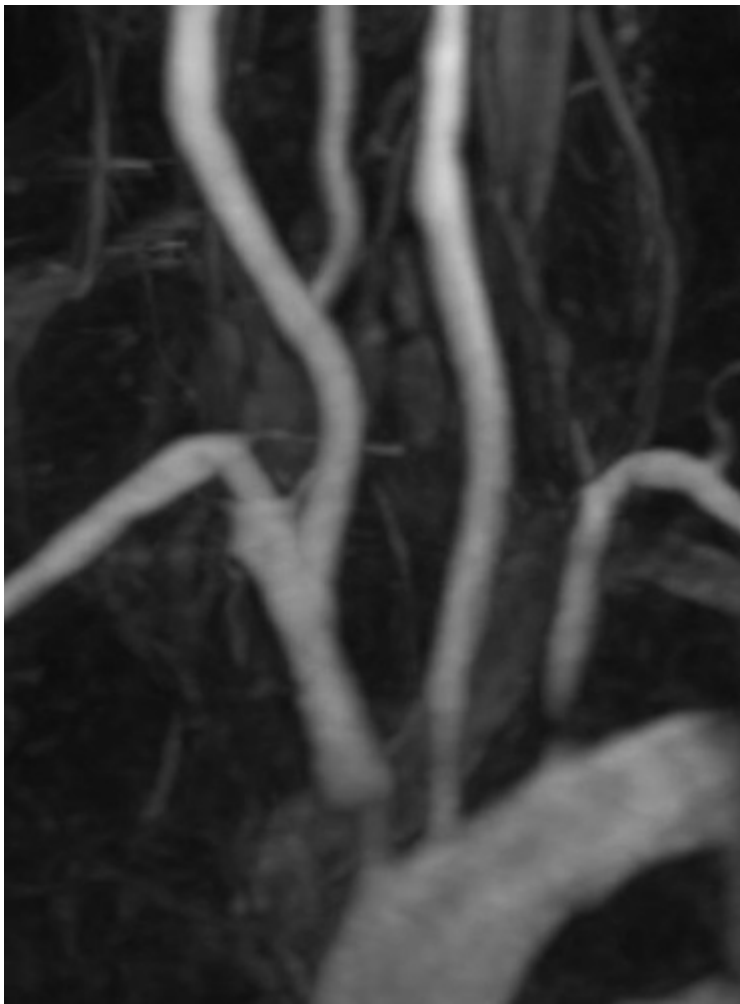
□ Question 74 of 193

□ □

A 26-year-old woman is investigated for persistent malaise, fever, headaches and raised inflammatory markers. She was diagnosed with Raynaud's syndrome three years ago after complaining of cold hands. The most recent bloods in the referral letter show a CRP of 64 mg/l.

On examination blood pressure is 80/64 mmHg in the right arm and 72/54 mmHg in the left arm. The heart rate is 72/min and a diastolic murmur is noted on auscultation of the heart.

Magnetic resonance angiography is requested:



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What is the most appropriate management?

	Plasma exchange
	Rituximab
	Prednisolone
	Cardiothoracic surgery referral
	Intravenous immunoglobulin

Dashboard

Overall score: 0%

1 -

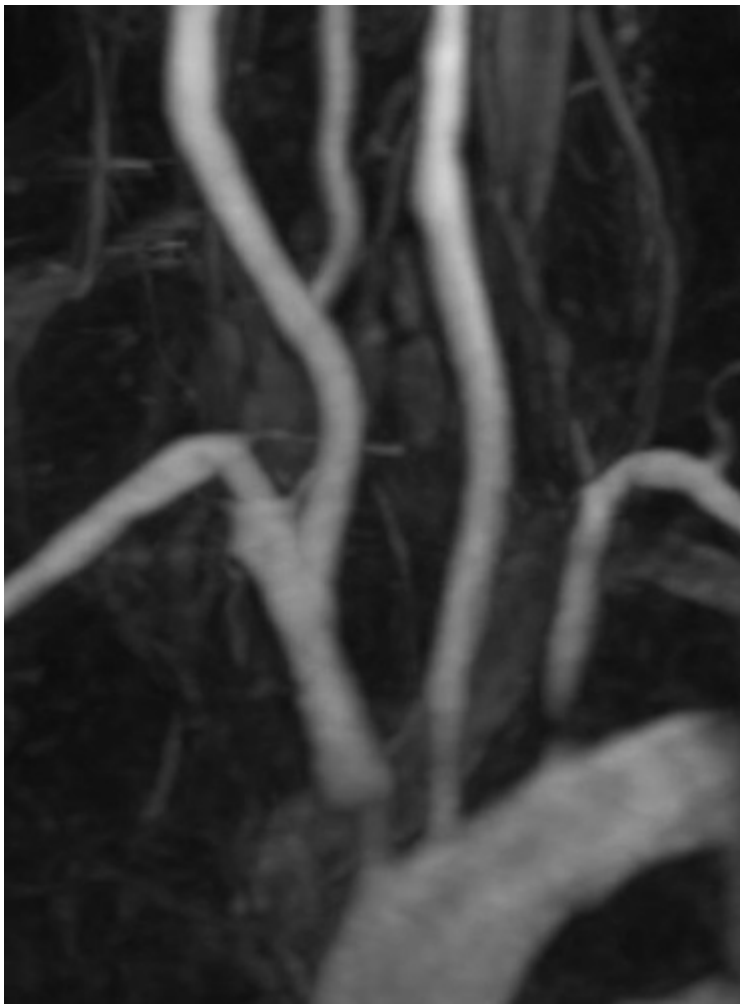
□ Question 74 of 193

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	Plasma exchange
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Dashboard

Overall score: **0%**

1 -

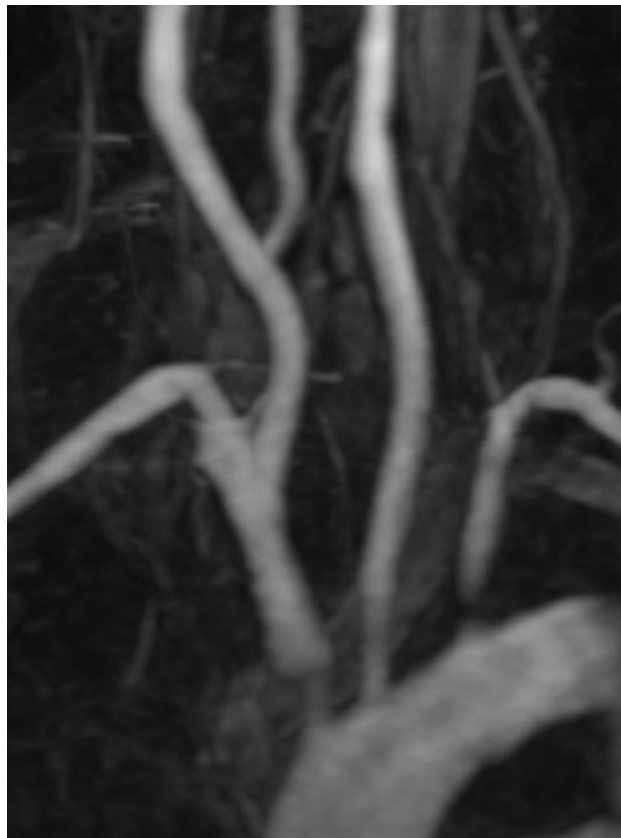
□ Question 74 of 193

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© Image used on license from Radiopaedia



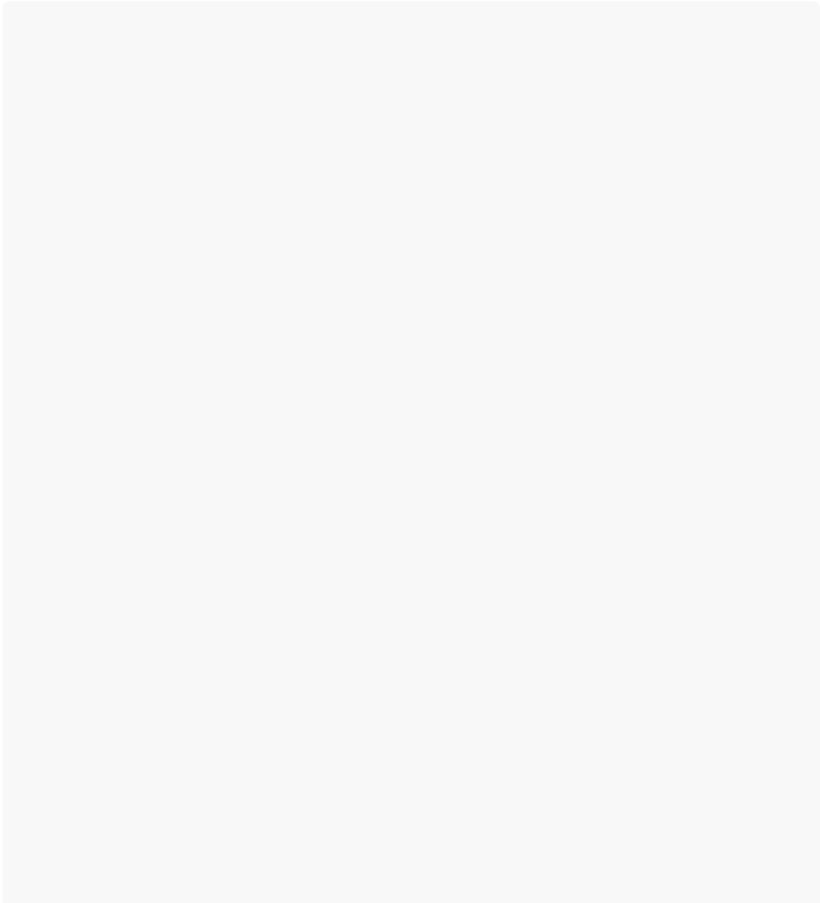
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	Plasma exchange
	Rituximab

	Prednisolone
	Cardiothoracic surgery referral
	Intravenous immunoglobulin

Dashboard

Overall score: **0%**
1 -





Question 75 of 193



A 65-year-old with exertional dyspnoea over the past 3 months is referred to the pulmonary hypertension team. An initial echocardiogram demonstrated 65% ejection fraction, preserved left ventricular function with a pulmonary arterial pressure of 72 mmHg. She undergoes a right and left heart catheter, revealing the following saturations:

Right atrium high	60%
Right atrium mid	89%
Right atrium low	70%
Right ventricle high	70%
Right ventricle mid	73%
Right ventricle low	72%
Pulmonary artery	71%
Capillary wedge	96%

What is the most likely diagnosis?

	Aortic stenosis
	Atrial septal primum defect
	Atrial septal secundum defect
	Pulmonary stenosis
	Mitral stenosis

Overall score: **0%**

1 -

Question 75 of 193



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Right atrium high	60%
Right atrium mid	89%
Right atrium low	70%
Right ventricle high	70%
Right ventricle mid	73%
Right ventricle low	72%
Pulmonary artery	71%
Capillary wedge	96%

What is the most likely diagnosis?

	Aortic stenosis
	Atrial septal primum defect
	Atrial septal secundum defect
	Pulmonary stenosis
	Mitral stenosis

Overall score: **0%**

1 -

□ Question 76 of 193



You review a 65 year-old male who was admitted yesterday. He is a diabetic gentleman who was admitted with a non-ST elevation myocardial infarction and subsequent flash pulmonary oedema. He has been treated with aspirin, clopidogrel, fondaparinux and intravenous furosemide. He is achieving a good diuresis - producing 100mls of urine per hour.

You have been asked to see him as he continues to have significant breathlessness but no ongoing chest pain. His blood pressure is 92/87mmHg and oxygen saturations are 83% on 65% humidified oxygen. He has bibasal crepitations and JVP is raised. His ABG results are as follows:

pH	7.32
pCO ₂	4.6kPa
pO ₂	7.9kPa

What would be your next clinical intervention?

<input type="checkbox"/>	Start non-invasive ventilation
<input type="checkbox"/>	Start continuous positive airway pressure ventilation (CPAP)
<input type="checkbox"/>	Refer for angiography and primary coronary intervention
<input type="checkbox"/>	Start a tirofiban infusion
<input type="checkbox"/>	Start a GTN infusion

Dashboard

Overall score: 0%

1 -

□ Question 76 of 193



You review a 65 year-old male who was admitted yesterday. He is a diabetic gentleman who was admitted with a non-ST elevation myocardial infarction and subsequent flash pulmonary oedema. He has been treated with aspirin, clopidogrel, fondaparinux and intravenous furosemide. He is achieving a good diuresis - producing 100mls of urine per hour.

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	Start continuous positive airway pressure ventilation (CPAP)
	Refer for angiography and primary coronary intervention
	Start a tirofiban infusion
	Start a GTN infusion

Dashboard

Overall score: **0%**

1 -

□ Question 77 of 193



A 79-year-old woman is reviewed in cardiology clinic as part of the ongoing assessment for possible intervention for severe aortic stenosis. The patient had been diagnosed with severe aortic stenosis 4 months previously, after experiencing progressive exertional breathlessness and reduced exercise tolerance. At her initial review at cardiology clinic, the patient had expressed interest in undergoing intervention for aortic stenosis: either surgical aortic valve replacement (SAVR) or transcatheter aortic valve insertion (TAVI). Subsequently, the patient had undergone a variety of investigations to assess her suitability for the above procedures.

The patient had a good functional status, leaving independently with her daughter and still participating in a wide range of community activities. The patient had a long-standing diagnosis of hypertension and had suffered a left cortical stroke 3 years previously. In addition, the patient had chronic obstructive pulmonary disease, although she had stopped smoking 30 years previously. The patient's regular medications were amlodipine, ramipril, clopidogrel, simvastatin and an ipratropium inhaler. The patient used a salbutamol inhaler as required. The patient had no known drug allergies.

A summary of the investigations undergone by the patient is given below.

Haemoglobin	128 g / dL
Mean cell volume	87.1 fl
White cell count	6.3×10^3 / microlitre
Platelets	324×10^3 / microlitre
Urea	5.3 mmol / L
Creatinine	124 micromol / L
Sodium	136 mmol / L
Potassium	4.6 mmol / L

Investigation	Result
Transthoracic	Severe aortic stenosis (valve area 0.85 cm ²); no other valve disease; normal systolic function;

echocardiogram	no anatomic contraindications to TAVI
Coronary angiography	No evidence of coronary artery disease
Iliofemoral angiography	Severe calcification and tortuosity of iliac arteries; unsuitable for transfemoral TAVI
Pulmonary function tests	Moderate obstructive lung disease

Following the above assessment, surgical aortic valve replacement was estimated to carry a 4.1 % risk of mortality and 3.7 % risk of permanent stroke (intermediate risk). No contraindications to transapical transcatheter aortic valve insertion were identified.

What is the recommended choice of intervention for the patient's aortic stenosis?

<input type="radio"/>	Surgical aortic valve replacement and transcatheter aortic valve insertion inappropriate
<input type="radio"/>	Surgical aortic valve replacement with mechanical valve
<input type="radio"/>	Transapical transcatheter aortic valve insertion
<input type="radio"/>	Surgical aortic valve replacement with bioprosthetic valve
<input type="radio"/>	Transfemoral transcatheter aortic valve insertion

Dashboard

Overall score: **0%**

1 -

□ Question 77 of 193



A 79-year-old woman is reviewed in cardiology clinic as part of the ongoing assessment for possible intervention for severe aortic stenosis. The patient had been diagnosed with severe aortic stenosis 4 months previously, after experiencing progressive exertional breathlessness and reduced exercise tolerance. At her initial review at cardiology clinic, the patient had expressed interest in undergoing intervention for aortic stenosis: either surgical aortic valve replacement (SAVR) or transcatheter aortic valve insertion (TAVI). Subsequently, the patient had undergone a variety of investigations to assess her suitability for the above procedures.

The patient had a good functional status, leaving independently with her daughter and still participating in a wide range of community activities. The patient had a long-standing diagnosis of hypertension and had suffered a left cortical stroke 3 years previously. In addition, the patient had chronic obstructive pulmonary disease, although she had stopped smoking 30 years previously. The patient's regular medications were amlodipine, ramipril, clopidogrel, simvastatin and an ipratropium inhaler. The patient used a salbutamol inhaler as required. The patient had no known drug allergies.

A summary of the investigations undergone by the patient is given below.

Haemoglobin	128 g / dL
Mean cell volume	87.1 fl
White cell count	6.3×10^3 / microlitre
Platelets	324×10^3 / microlitre
Urea	5.3 mmol / L
Creatinine	124 micromol / L
Sodium	136 mmol / L
Potassium	4.6 mmol / L

Investigation	Result
Transthoracic	Severe aortic stenosis (valve area 0.85 cm ²); no other valve disease; normal systolic function;

echocardiogram	no anatomic contraindications to TAVI
Coronary angiography	No evidence of coronary artery disease
Iliofemoral angiography	Severe calcification and tortuosity of iliac arteries; unsuitable for transfemoral TAVI
Pulmonary function tests	Moderate obstructive lung disease

Following the above assessment, surgical aortic valve replacement was estimated to carry a 4.1 % risk of mortality and 3.7 % risk of permanent stroke (intermediate risk). No contraindications to transapical transcatheter aortic valve insertion were identified.

What is the recommended choice of intervention for the patient's aortic stenosis?

	Surgical aortic valve replacement and transcatheter aortic valve insertion inappropriate
	Surgical aortic valve replacement with mechanical valve
	Transapical transcatheter aortic valve insertion
	Surgical aortic valve replacement with bioprosthetic valve
	Transfemoral transcatheter aortic valve insertion

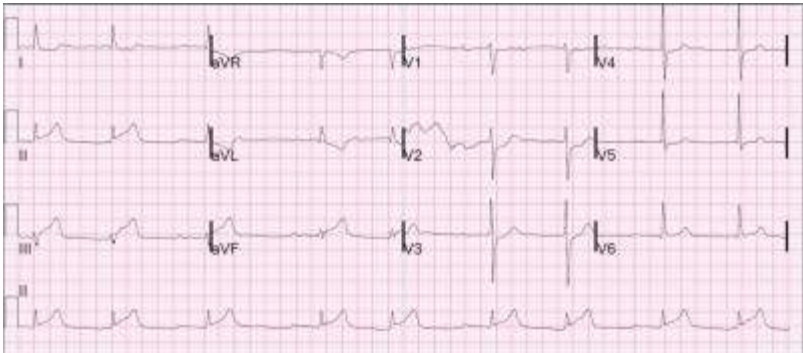
Dashboard

Overall score: **0%**

1 -

Question 78 of 193

A 67-year-old man presents to the Emergency Department with central crushing chest pain. His ECG is shown below:



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What is shown on the ECG?

	Anterior non-ST elevation MI + atrioventricular block
	Inferior ST elevation MI + atrioventricular block
	Inferior ST elevation MI + left bundle branch block
	Inferior ST elevation MI + right bundle branch block
	Anterior non-ST elevation MI + complete heart block

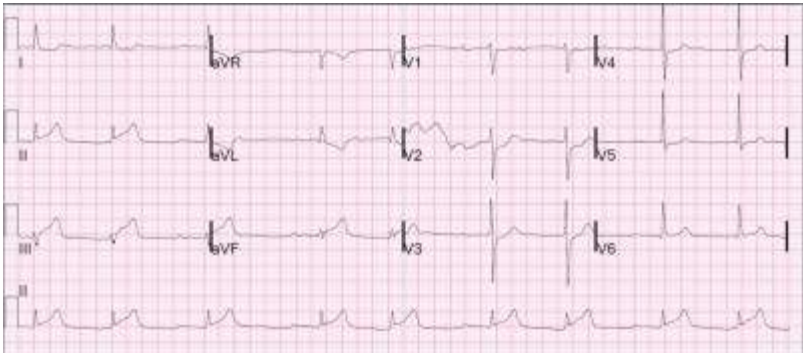
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Question 78 of 193

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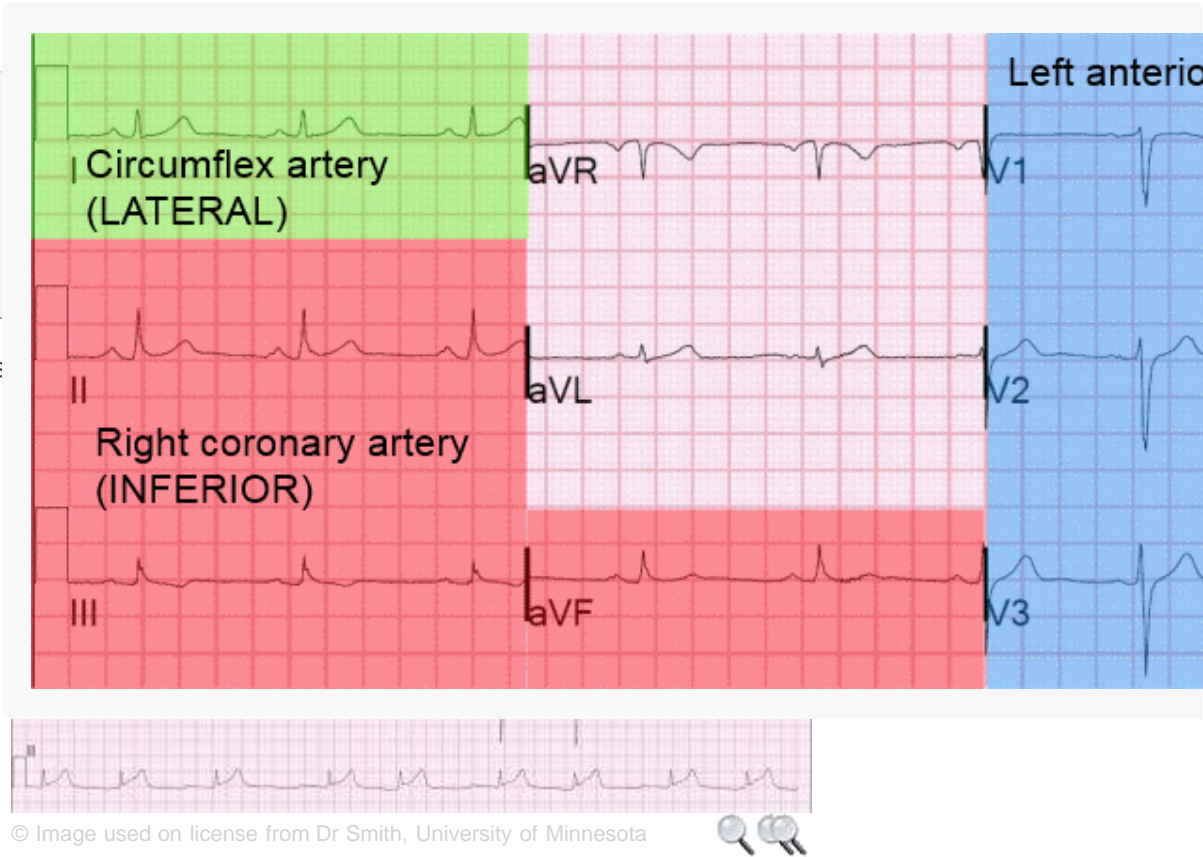
Dashboard

Overall score: 0%

1 -

Question 78 of 193

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What is shown on the ECG?

	Anterior non-ST elevation MI + atrioventricular block
	Inferior ST elevation MI + atrioventricular block
	Inferior ST elevation MI + left bundle branch block
	Inferior ST elevation MI + right bundle branch block
	Anterior non-ST elevation MI + complete heart block

Dashboard

Overall score: 0%

1 -

Question 79 of 193

□ □

A 55-year-old man with type 2 diabetes comes to the Emergency department with symptoms of worsening cardiac failure. Current medication includes metformin and empagliflozin for blood glucose control, ramipril, doxazosin, furosemide, aspirin and atorvastatin. His blood pressure is 112/70 mmHg, his pulse is 80 beats per minute and regular. There are bilateral crackles to the mid zones on auscultation of the chest, and he has pitting oedema to the mid-shins bilaterally.

Investigations

Na ⁺	138 mmol/l
K ⁺	4.5 mmol/l
Urea	6.2 mmol/l
Creatinine	112 µmol/l

Which of the following medications would you discontinue?

	Atorvastatin
	Doxazosin
	Empagliflozin
	Metformin
	Ramipril

Dashboard

Overall score: 0%

Question 79 of 193

☐ ☐

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Investigations

Na ⁺	138 mmol/l
K ⁺	4.5 mmol/l
Urea	6.2 mmol/l
Creatinine	112 µmol/l

Which of the following medications would you discontinue?

	Atorvastatin
	Doxazosin
	Empagliflozin
	Metformin
	Ramipril

Dashboard

Overall score: **0%**

Question 80 of 193

□ □

A 52-year-old woman presents with worsening exercise tolerance. Her GP has recently increased her asthma treatment but this has not helped, nor does she have any relief from her salbutamol inhaler. She has no other known medical history. On examination, her lung fields sound clear on auscultation but she has an early diastolic murmur. She has already had a chest X-ray demonstrating enlarged proximal pulmonary arteries. Which investigation is most likely to provide the correct diagnosis?

	ECG
	Renal function blood tests
	Echocardiogram
	High-resolution CT chest
	Right heart catheterisation

Dashboard

Overall score: 0%

1 -

Question 80 of 193

□ □

A 52-year-old woman presents with worsening exercise tolerance. Her GP has recently increased her asthma treatment but this has not helped, nor does she have any relief from her salbutamol inhaler. She has no other known medical history. On examination, her lung fields sound clear on auscultation but she has an early diastolic murmur. She has already had a chest X-ray demonstrating enlarged proximal pulmonary arteries. Which investigation is most likely to provide the correct diagnosis?

	ECG
	Renal function blood tests
	Echocardiogram
	High-resolution CT chest
	Right heart catheterisation

Dashboard

Overall score: **0%**

1 -

Question 81 of 193

You review a 60-year-old man in resus who has been admitted with a 30 minute history of cardiac-sounding chest pain. His ECG is shown below:



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Where is the lesion most likely to be?

	Right coronary
	Left main stem
	Posterior intraventricular artery
	Left anterior descending
	Left circumflex

Dashboard

Overall score: 0%

1 -

Question 81 of 193

You review a 60-year-old man in resus who has been admitted with a 30 minute history of cardiac-sounding chest pain. His ECG is shown below:



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Where is the lesion most likely to be?

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	Left main stem
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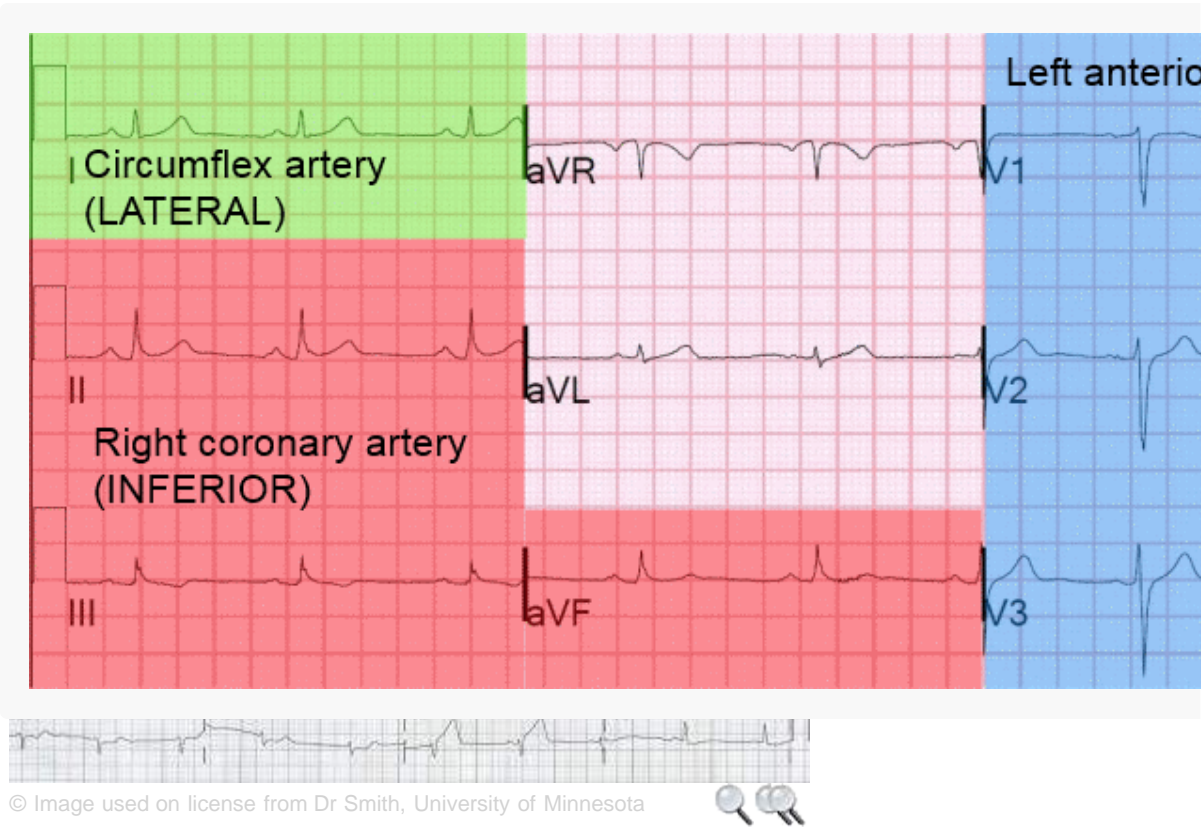
Dashboard

Overall score: 0%

1 -

Question 81 of 193

You review a 60-year-old man.
His ECG is shown below:



Where is the lesion most likely to be?

	Right coronary
	Left main stem
	Posterior intraventricular artery
	Left anterior descending
	Left circumflex

Dashboard

Overall score: 0%

1 -

□ Question 82 of 193



A 19-year-old girl was seen in clinic with lethargy, weakness worsening over the past 4 weeks. She also complains of recurrent muscle cramps in her legs, causing her to have trouble sleeping. On further questioning she admits to urinary frequency, passing urine up to ten times a day, and feels dehydrated all the time. She also mentions that her periods which were usually irregular, have stopped 4 months ago.

On examination, she is thin, with a body mass index of 17kg/m². Her heart rate is 88 bpm and blood pressure is 108/86 mmHg.

C Reactive protein	2mg/l
Haemoglobin	158 g/l
White cell count	7.6 x 10 ⁹ /L
Na+	136 mmol/l
K+	2.9 mmol/l
Urea	7.2 mmol/l
Creatinine	108 µmol/l
Corrected calcium	2.42 mmol/l

Venous blood gas result

pH	7.532
Bicarbonate	37mmol/l

What would be the next most useful investigation?

	Transvaginal ultrasound (TVUS) of the ovaries
	Urine diuretic assay

	Early morning cortisol
	Serum renin and aldosterone levels
	Fasting blood glucose levels

Dashboard

Overall score: **0%**

1 -

Question 82 of 193



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Urine diuretic assay

	Early morning cortisol
	Serum renin and aldosterone levels
	Fasting blood glucose levels

Dashboard

Overall score: **0%**
1 -

Question 83 of 193

□ □

A 43-year-old lady with a history of schizophrenia presents to the emergency department with palpitations, headaches and dizziness for 3 days. She says that she can feel her heart pounding after which she becomes dizzy and feels faint. She has noted these bouts about three to four times per day. She does not suffer from diabetes and is not hypertensive.

Regarding her headaches, she has had them for a long period of time and is quite convinced that there is some sort of sinister problem with her brain, although her doctors do not believe so. She has a younger sister who has had epilepsy for the last 15 years.

She was diagnosed as having a UTI 4 days ago which is currently being treated with ciprofloxacin. Her medication history includes olanzapine and occasional paracetamol for her headaches.

On examination, her pulse was 135 bpm with an irregular rhythm. Blood pressure was 90/60mmHg. Her systemic examination was unremarkable.

Attachment to a cardiac monitor revealed runs of ill sustained polymorphic tachycardia. She was immediately given IV lidocaine to which there was no response.

Which is the most appropriate next step in management?

	Immediate DC cardioversion
	IV amiodarone
	IV flecainide
	IV magnesium sulphate
	IV labetalol

Overall score: **0%**

1 -

Question 83 of 193

□ □

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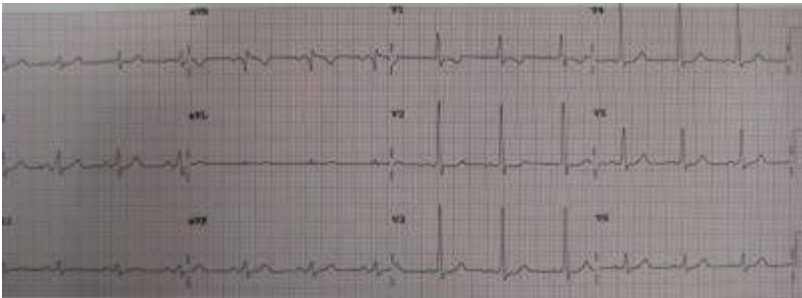
	Immediate DC cardioversion
	IV amiodarone
	IV flecainide
	IV magnesium sulphate
	IV labetalol

Overall score: **0%**

1 -

Question 84 of 193

A 26 year old female presents with a third episode of palpitations associated with shortness of breath and chest discomfort. She has no other past medical history, thyroid function tests unremarkable. She denies taking any recreational drugs and has no significant family history. Her ECG is as follows:



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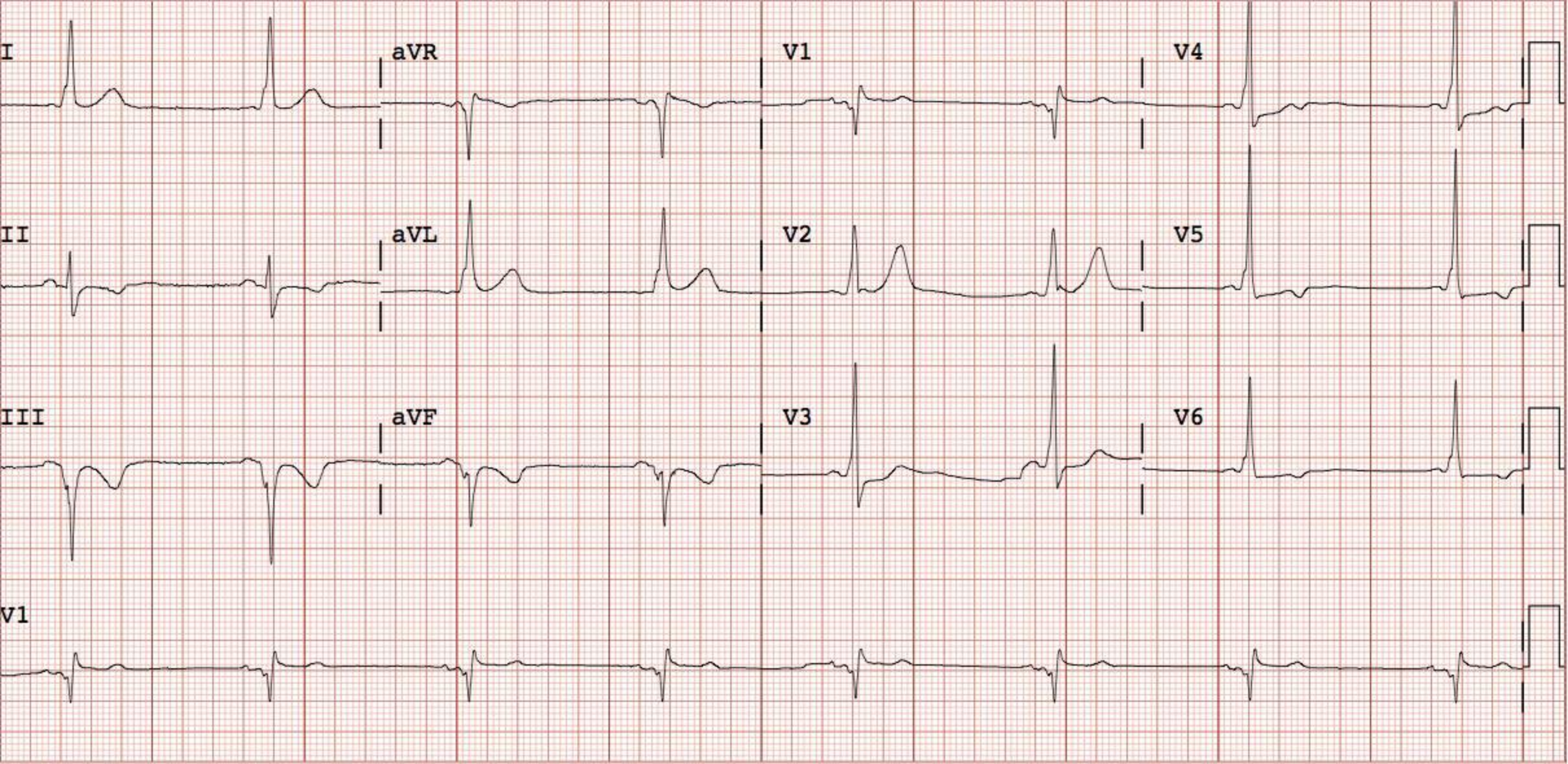
Which of the following drugs would be safe to administer immediately if she becomes tachycardic?

	Adenosine
	Digoxin
	Diltizaem
	Verapamil
	Procainamide

Dashboard

Overall score: 0%

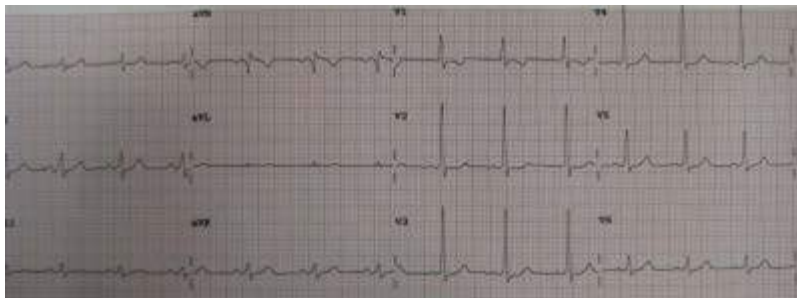
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□ Question 84 of 193



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Which of the following drugs would be safe to administer immediately if she becomes tachycardic?

	Adenosine
	Digoxin
	Diltiazem
	Verapamil
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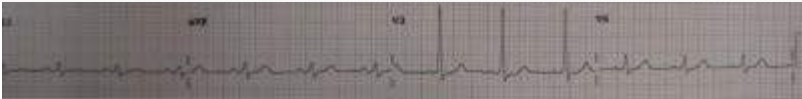
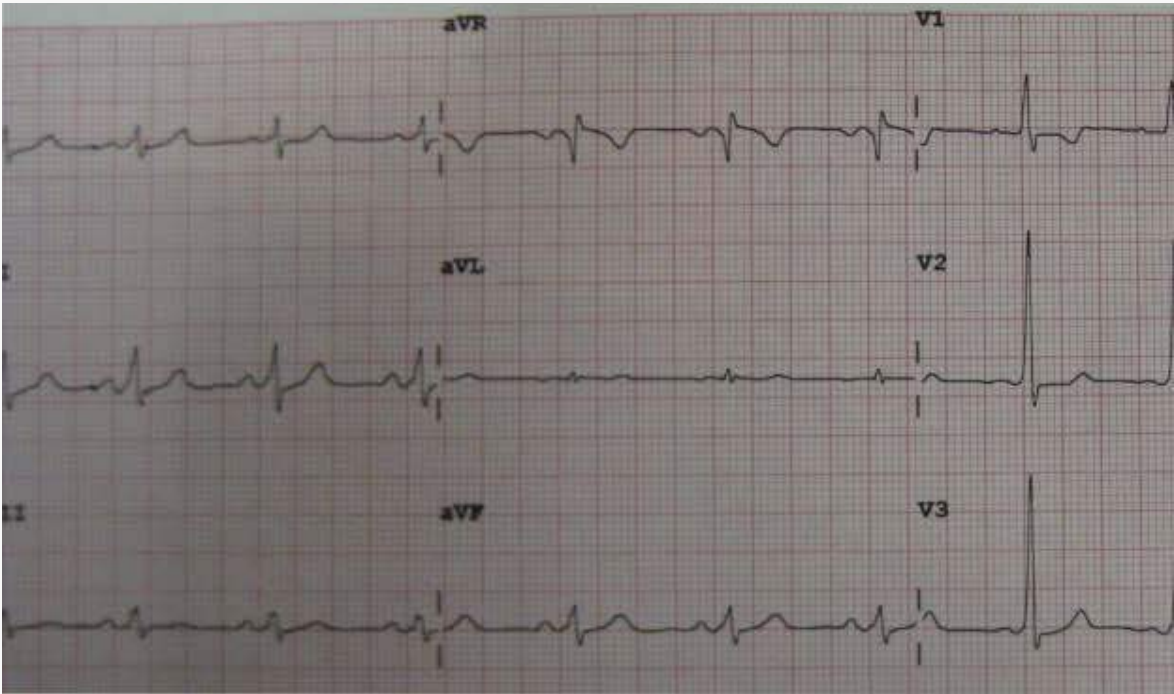
Dashboard

Overall score: 0%

1 -

Question 84 of 193

A 26 year old female presents with chest discomfort. She has no other medical history and has not used recreational drugs and has not taken any medications.



© Image used on license from Dr Smith, University of Minnesota



Which of the following drugs would be safe to administer immediately if she becomes tachycardic?

	Adenosine
	Digoxin
	Diltiazem
	Verapamil
	Procainamide

Dashboard

Overall score: 0%

1 -

Question 84 of 193

A 26 year old female presents with a third episode of palpitations. She has no other past medical history, thyroid function tests are normal, no recreational drugs and has no significant family history. Her ECG is shown below.



© Image used on license from Dr Smith, University of Minnesota



Which of the following drugs would be safe to administer immediately if she becomes tachycardic?

	Adenosine
	Digoxin
	Diltiazem
	Verapamil
	Procainamide

Dashboard

Overall score: 0%

1 -

□ Question 85 of 193

□ □

A 20-year-old girl complains of feeling tired. She has no past medical history and takes no regular medications. The following blood tests were obtained:

Hb	84g/L
MCV	70fL
WBC	$8 \times 10^9/\text{L}$
Platelets	$460 \times 10^9/\text{L}$

Blood film analysis comments on hypochromic anaemia with pencil cells, target cells, acanthocytes and Howell Jolly bodies.

What is the most likely diagnosis?

	Sickle cell anaemia
	Hereditary spherocytosis
	Thalassaemia trait
	Iron deficiency anaemia
	Coeliac disease

Dashboard

Overall score: 0%

1 -

Question 85 of 193

□ □

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	Sickle cell anaemia
	Hereditary spherocytosis
	Thalassaemia trait
	Iron deficiency anaemia
	Coeliac disease

Dashboard

Overall score: **0%**

1 -

Question 86 of 193

□ □

A 43-year-old with no past medical history presents with 6 months history of exertional dyspnoea. Her echocardiogram demonstrated impaired right ventricular function with raised pulmonary arterial pressure of 78 mmHg, good systolic function and ejection fraction 80%. Right and left heart catheterisation demonstrated pulmonary arterial hypertension, with a pulmonary arterial pressure of 49/24 mmHg, V/Q scan demonstrated no chronic pulmonary emboli, CTPA no acute emboli, ultrasound abdomen no portal hypertension. She is at present comfortable at rest but is short of breath on minimal activity. What is the appropriate management?

	No treatment
	IV prostaglandin
	Oral sildenafil
	Atrial septostomy
	List for lung transplantation

Dashboard

Overall score: 0%

1 -

Question 86 of 193

□ □

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	No treatment
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	Atrial septostomy
	List for lung transplantation

Dashboard

Overall score: **0%**

1 -

Question 87 of 193



A 68 year-old man with a history of ischaemic heart disease and type 2 diabetes mellitus is 2 days post right curative hemicolectomy for bowel malignancy.

He has developed chest pain and shortness of breath. The surgical team have requested an urgent medical review.

On examination the patient appears distressed and is complaining of chest pain and breathlessness. Capillary refill time is 5 seconds centrally. The pulse rate is 200bpm and the blood pressure is 87/45mmHg. Oxygen saturations are 92% on fiO2 0.4 via Venturi mask.

There are crackles to the midzones bilaterally on chest auscultation.

A 12-lead ECG reveals a regular broad complex tachycardia with a monomorphic waveform.

Blood results from the morning reveal:

Hb	129 g/l
Platelets	564 * 10 ⁹ /l
WBC	15.8 * 10 ⁹ /l
Na ⁺	128 mmol/l
K ⁺	3.3 mmol/l
Urea	12.9 mmol/l
Creatinine	101 µmol/l
Bilirubin	27 µmol/l
ALP	125 u/l
ALT	34 u/l
Albumin	36 g/l

What is the most appropriate initial management?

	Adenosine 6mg IV
	Amiodarone 300mg IV
	Magnesium sulphate 2g IV
	Synchronised DC shock
	Metoprolol 5mg IV

Dashboard

Overall score: 0%

1 -

Question 87 of 193



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	Magnesium sulphate 2g IV
	Synchronised DC shock
	Metoprolol 5mg IV

Dashboard

Overall score: 0%

1 -

Question 88 of 193

□ □

A 74-year-old female patient sees you in cardiology outpatients clinic for review due to severe heart failure. A recent echocardiogram shows a left ventricular ejection fraction of 15%. She remains disabled by her symptoms, unable to walk 50 meters due to breathlessness. The resting ECG shows sinus rhythm at 72 beats per minute, her blood pressure in clinic is 109/57 mmHg. There is no fluid overload on examination. She is already taking bisoprolol, enalapril, spironolactone and furosemide at maximum tolerated doses.

Which treatment would you consider adding?

	Losartan
	Amiodarone
	Hydralazine and isosorbide dinitrate (modified release)
	Digoxin
	Ivabradine

Dashboard

Overall score: 0%

1 -

Question 88 of 193

□ □

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	Losartan
	Amiodarone
	Hydralazine and isosorbide dinitrate (modified release)
	Digoxin
	Ivabradine

Dashboard

Overall score: **0%**

1 -

Question 89 of 193

□ □

A 23 year old rugby player has a blackout whilst playing a match. No head injury is noted. There was no warning and he recovered quickly within seconds. This has never happened before. There was no chest pain. His father died in his sleep aged 49 and was known to have Brugada Syndrome. At presentation several hours later the patient's electrocardiogram (ECG) and routine blood profile including FBC, U&E, and glucose are normal. He is sent to cardiology clinic for further investigation. A diagnosis of Brugada Syndrome is suspected. Which agent may they elect to use there to provoke the down-going ST elevation in leads V1-V3 characteristically seen in the ECG of a patient with Brugada Syndrome?

	Digoxin
	Sotalol
	Nifedipine
	Adenosine
	Flecainide

Dashboard

Overall score: 0%

1 -

□ Question 89 of 193

□ □

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	Digoxin
	Sotalol
	Nifedipine
	Adenosine
	Flecainide

Dashboard

Overall score: **0%****1** -

Question 90 of 193

□ □

A 50-year-old lady presented with a 2 month history of breathlessness on exertion, increasing leg swelling and more recently a rash across her face. She was found to be in congestive heart failure, acute kidney injury and she was being treated with diuretics. Her echocardiogram showed severe left ventricular dysfunction. A few days into her admission she sustained a ventricular fibrillation cardiac arrest, which was successfully treated and the patient was started on amiodarone and betablocker. Her blood tests following the cardiac arrest did not show any electrolyte abnormalities. She also had a coronary angiogram which revealed normal coronary arteries. Subsequently, she was diagnosed with systemic lupus erythematosus and associated lupus myocarditis and she started appropriate immunosuppressive treatment for lupus.

What would be the best management for her ventricular fibrillation cardiac arrest?

	Continue amiodarone indefinitely
	Implantable cardioverter defibrillator immediately and stop amiodarone
	Continue amiodarone and medical treatment of lupus and review progress in clinic to decide about implantable cardioverter defibrillator
	Implantable cardioverter defibrillator immediately and amiodarone indefinitely
	None of the above

Dashboard

Overall score: 0%

1 -

□ Question 90 of 193

□ □

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	Implantable cardioverter defibrillator immediately and amiodarone indefinitely
	None of the above

Dashboard

Overall score: **0%****1** -

□ Question 91 of 193

□ □

A 53-year-old Syrian refugee is referred to the cardiology clinic by her GP with dyspnoea and increasing peripheral oedema. Her past medical history is significant for rheumatic fever as a child. She gives a six month history of increasing dyspnoea on exertion. Her dyspnoea is now so severe that she has marked limitation in activity, being only able to walk 30 meters before stopping because of symptoms. She experiences no chest pain but tells you that she has taken to sleeping in a chair at night and has a chronic cough productive of pink sputum. More recently, she has awoken breathless from sleep terrified that she is going to die. On examination she has clinical evidence of severe mitral stenosis. She has an irregularly-irregular pulse and an ECG confirms atrial fibrillation at a rate of 89 bpm. Auscultation reveals a mid-diastolic murmur, an opening snap and a loud P2. She has bibasal crepitations and pitting oedema to below the knee. Her echo confirms severe mitral stenosis with a mitral valve area of 0.7cm² and a mean gradient of 12mmHg. There is no evidence of mitral regurgitation and the sonographer comments that she has favourable mitral valve morphology. Assuming a TOE excludes a left apical thrombosis, how should this lady be managed?

	Diuresis, anticoagulate with one of the oral direct thrombin inhibitors/ factor Xa inhibitors and percutaneous mitral valve balloon valvotomy
	Diuresis, anticoagulate with warfarin and refer for mitral valve replacement
	Diuresis, anticoagulate with warfarin and repeat echo in three months time
	Diuresis, anticoagulate with one of the oral direct thrombin / factor Xa inhibitors and refer for mitral valve replacement
	Diuresis, anticoagulate with warfarin and percutaneous mitral valve balloon valvotomy

Dashboard

Overall score: 0%

1 -

Question 91 of 193

A 53-year-old Syrian refugee is referred to the cardiology clinic by her GP with dyspnoea and increasing peripheral oedema. Her past medical history is significant for rheumatic fever as a child. She gives a six month history of increasing dyspnoea on exertion. Her dyspnoea is now so severe that she has marked limitation in activity, being only able to walk 30 meters before stopping because of symptoms. She experiences no chest pain but tells you that she has taken to sleeping in a chair at night and has a chronic cough productive of pink sputum. More recently, she has awoken breathless from sleep terrified that she is going to die. On examination she has clinical evidence of severe mitral stenosis. She has an irregularly-irregular pulse and an ECG confirms atrial fibrillation at a rate of 89 bpm. Auscultation reveals a mid-diastolic murmur, an opening snap and a loud P2. She has bibasal crepitations and pitting oedema to below the knee. Her echo confirms severe mitral stenosis with a mitral valve area of 0.7cm² and a mean gradient of 12mmHg. There is no evidence of mitral regurgitation and the sonographer comments that she has favourable mitral valve morphology. Assuming a TOE excludes a left apical thrombosis, how should this lady be managed?

	Diuresis, anticoagulate with one of the oral direct thrombin inhibitors/ factor Xa inhibitors and percutaneous mitral valve balloon valvotomy
	Diuresis, anticoagulate with warfarin and refer for mitral valve replacement
	Diuresis, anticoagulate with warfarin and repeat echo in three months time
	Diuresis, anticoagulate with one of the oral direct thrombin / factor Xa inhibitors and refer for mitral valve replacement
	Diuresis, anticoagulate with warfarin and percutaneous mitral valve balloon valvotomy

Dashboard

Overall score: **0%**

1 -

□ Question 91 of 193

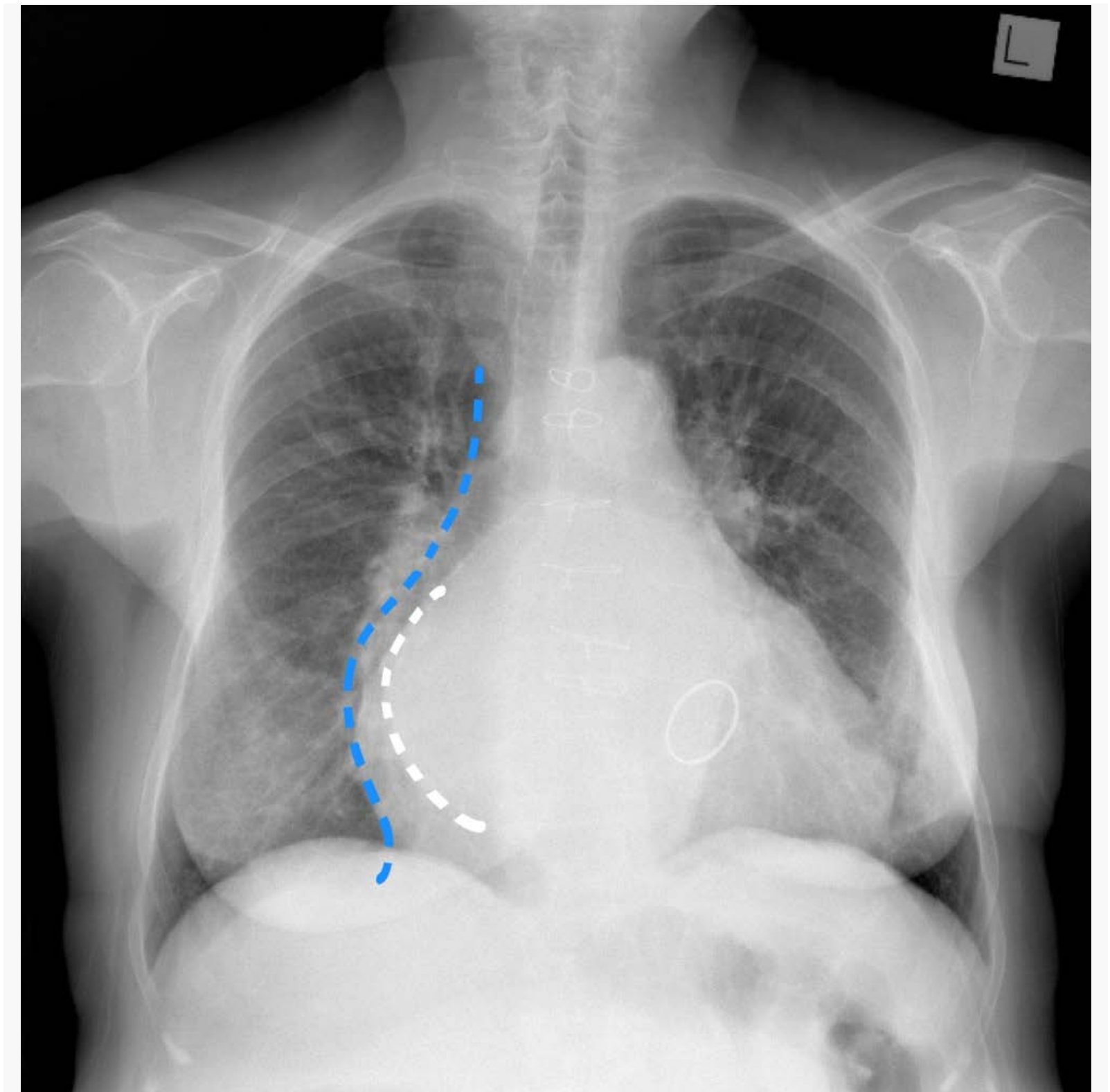
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	Diuresis, anticoagulate with warfarin and percutaneous mitral valve balloon valvotomy

Dashboard

Overall score: **0%****1** -



Question 92 of 193

□ □

A 57-year-old man is presents after incidental finding of a systolic murmur. He is normally fit, well and active. His past medical history includes hypertension, gout and appendicectomy. Observations are normal and a transthoracic echocardiogram demonstrates aortic stenosis with the surface area of the aortic valve at 0.8cm² and a pressure gradient of 53mmHg. The ejection fraction is 64%. He denies any exertional symptoms including shortness of breath and chest pain. What is the most appropriate management plan?

	Review in six months
	Exercise test
	Transcatheter aortic valve implantation (TAVI)
	Aortic valve replacement
	Trans-oesophageal echocardiogram

Dashboard

Overall score: 0%

1 -

□ Question 92 of 193

□ □

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	Review in six months
	Exercise test
	Transcatheter aortic valve implantation (TAVI)
	Aortic valve replacement
	Trans-oesophageal echocardiogram

Dashboard

Overall score: **0%****1** -

Question 93 of 193



A 67 year old male presents with increasing chest pain on exertion over the past 3 weeks, stopping him from going to work. His past medical history includes hypertension, type 2 diabetes mellitus, sick sinus syndrome, recent abstinence from alcohol after history of excess (with an episode of acute liver decompensation 9 months ago) and stable angina. He previously tried isosorbide mononitrate but reported significant headaches and facial flushing. He has not previously suffered myocardial infarctions, with a recent echo demonstrating 70% ejection fraction. An ECG demonstrates first degree heart block with normal QRS complexes at 50 beats/ minute, blood pressure is 140/76 mmHg. He currently takes bisoprolol 5mg OD alone and has been using his GTN spray with increasing frequency without effect. What is the next appropriate management step?

	Reperfusion therapy with coronary artery bypass graft or percutaneous coronary intervention
	Ranolazine
	Ivabridine
	Diltiazem
	Nicorandil

Dashboard

Overall score: 0%
1 -

Question 93 of 193

□ □

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	Ranolazine
	Ivabridine
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Dashboard

Overall score: **0%**

1 -

□ Question 94 of 193



A 66-year-old lady attended a cardiology clinic for follow up after a recent hospital admission with pulmonary oedema. She continued to experience significant shortness of breath at rest with exercise tolerance that was limited to a few steps around the house. She had a previous medical history of hypertension, diabetes and myocardial infarction 5 years previously treated with percutaneous coronary intervention. Her medications comprised of bisoprolol 10mg, ramipril 10mg, furosemide 80mg twice daily, spironolactone 25mg, simvastatin 40mg, metformin 1g twice daily and aspirin 75mg. On examination she appeared breathless, the jugular venous pressure was elevated at 7cm, there were bibasal fine crepitations and moderate pitting oedema to her knees. Her heart rate was 68 beats per minute and blood pressure was 95/65mmHg.

Investigations:

Haemoglobin	115 g/L
White cell count	$5.6 \times 10^9/\text{L}$
Platelet Count	$268 \times 10^9/\text{L}$
Serum sodium	132mmol/L
Serum potassium	4.3mmol/L
Serum urea	6.7mmol/L
Serum creatinine	68micromol/L

Electrocardiogram: normal sinus rhythm. Rate 65 beats per minute. QRS duration 155ms. No acute ST changes.

Echocardiography: left ventricular ejection fraction of 30%. No significant valvular abnormalities.

Coronary angiography: Patent left anterior descending coronary artery stent. Minor diffuse coronary artery disease.

What is the most appropriate next management step?

	Increase dose of furosemide

	Cardiac resynchronisation therapy
	Coronary artery bypass graft
	Start amlodipine
	Home oxygen

Dashboard

Overall score: **0%**

1 -

□ Question 94 of 193



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	Cardiac resynchronisation therapy
	Coronary artery bypass graft
	Start amlodipine
	Home oxygen

Dashboard

Overall score: **0%**
1 -

□ Question 95 of 193

□ □

A 24-year-old male presents to the emergency department with a collapse. The previous night he had been out drinking heavily with his friends in a nightclub. A friend attends with him and states that some of the lads had taken MCAT (Mephedrone) but he is unsure whether Michael also took MCAT. Michael felt well when he woke up but realised that he was late for his football match so rushed out of the house without any breakfast. He had just scored the first goal of the match when he collapsed. When he came around he complained of palpitations.

His past medical history includes asthma and hay fever for which he takes regular antihistamines. During the ambulance ride to hospital the paramedic performed some observations and an ECG. He was found to have a blood glucose of 3.6 and was given some GlucoGel and a biscuit. Other observations included a blood pressure of 90/60 mmHg, heart rate of 135/min which was irregular, irregular in character, respiratory rate of 16/min, afebrile.

The emergency department doctor reviewed the ECG and diagnosed atrial fibrillation with a fast ventricular response and prescribed digoxin in view of his asthma history and blood pressure readings. The patient had a normal QTc. Five minutes later the cardiac monitor showed a broad complex tachycardia and Michael became unresponsive.

What was the cause of the patient's collapse?

	Hypertrophic cardiomyopathy (HCM)
	MCAT related arrhythmia
	Wolff-Parkinson-White syndrome
	Alcohol induced atrial fibrillation
	Torsades de pointes

Dashboard

Overall score: 0%

1 -

□ Question 95 of 193

□ □

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	Torsades de pointes

Dashboard

Overall score: 0%

1 -

Question 96 of 193

□ □

A 52-year-old lady was admitted with sudden onset central chest pain and breathlessness. Her past medical history included hypertension, atrial fibrillation and she was a smoker of 20 cigarettes a day. She lived alone after having recently split up with her husband which had been a difficult few weeks. Her friend had been staying with her occasionally during this difficult period.

She had a family history of ischaemic heart disease. She had recently complained to her friend of a cold that was now passing. Medications included aspirin 75mg OD and bisoprolol 5mg OD. Her friend called 999 and she was admitted directly to the angiogram suite as the paramedics noticed that her ECG showed ST elevation in the anterior chest leads.

Her angiogram showed mild coronary atherosclerosis but an akinetic left ventricle. Her troponin T was significantly elevated at 7800ng/L (normal < 14).

What is the most likely diagnosis?

	Pericarditis
	Myocardial infarction
	Embolic event
	Takotsubo cardiomyopathy
	Pneumothorax

Dashboard

Overall score: 0%

1 -

□ Question 96 of 193

□ □

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Dashboard

Overall score: 0%

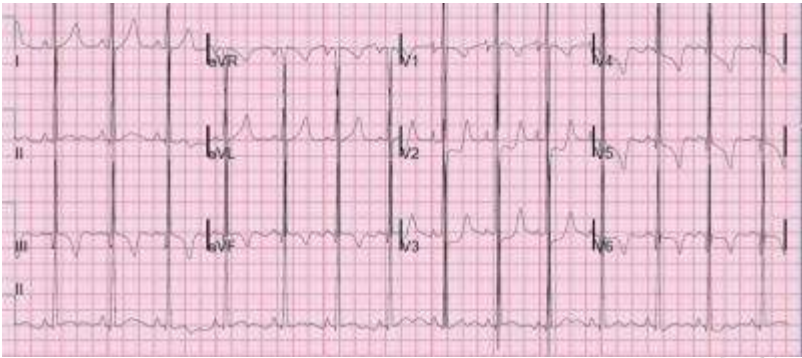
1 -

Question 97 of 193

A 46-year-old man presents to the Emergency Department with chest pain. This started earlier in the day after a particularly stressful meeting in the morning. He has no past medical history of note other than a brief episode of depression three years. The pain is described as a 'tightening' and 'pounding' and is associated with nausea and a headache.

On examination the heart rate is 96/min, blood pressure 140/92 mmHg and respiratory rate 18/min.

An ECG is taken:



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What does the ECG show?

	Hypertrophic obstructive cardiomyopathy
	Arrhythmogenic right ventricular dysplasia
	Brugada syndrome
	Subarachnoid haemorrhage
	Posterior myocardial infarction

Dashboard

Overall score: **0%**

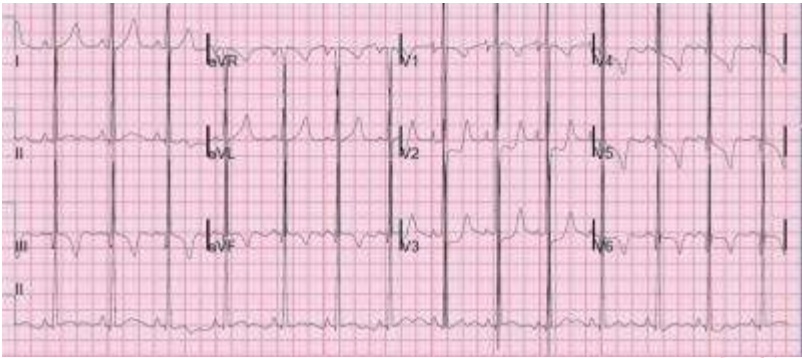
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Question 97 of 193

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	Arrhythmogenic right ventricular dysplasia
	Brugada syndrome
	Subarachnoid haemorrhage
	Posterior myocardial infarction

Dashboard

Overall score: **0%**

1 -

Question 98 of 193

A 79-year-old man presents with severe central chest pain which started around 90 minutes ago. He is known to have ischaemic heart disease and had a coronary artery bypass graft (CABG) five years ago. On arrival in the Emergency Department he is clammy and vomiting. An ECG is taken:



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What is the most accurate description of what is shown on this ECG?

(MI = myocardial infarction, STEMI = ST elevation myocardial infarction, NSTEMI = non-ST elevation myocardial infarction)

	Normal ECG
	Current inferior NSTEMI
	Current anterior NSTEMI
	Current inferior STEMI
	Current anterior STEMI

Overall score: **0%**

1 -

Question 98 of 193

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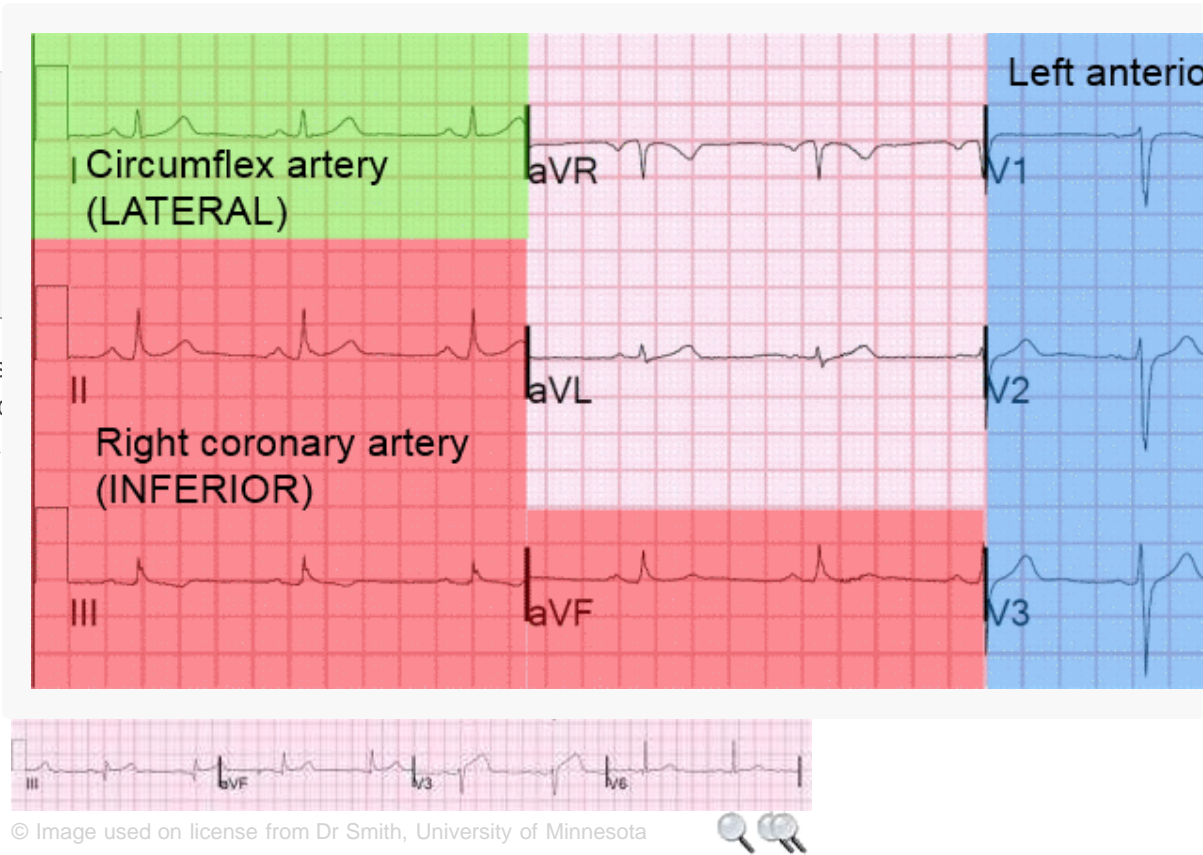
	Normal ECG
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Overall score: **0%**

1 -

Question 98 of 193

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	Normal ECG
	Current inferior NSTEMI
	Current anterior NSTEMI
	Current inferior STEMI
	Current anterior STEMI

Overall score: **0%**

1 -

Question 99 of 193

A 67-year-old gentleman is brought to the resuscitation area of the Emergency Department after an out of hospital cardiac arrest. The paramedics are performing CPR and a laryngeal mask airway in place for ventilation. They inform you that the patient is in asystole and they have already administered IV adrenaline. On the next rhythm check you notice some P-waves on the monitor.

Which of the following is the best management option?

	300mg IV amiodarone
	IV fluid bolus
	External pacing
	Defibrillation
	3mg IV atropine

Dashboard

Overall score: 0%

1 -

Question 99 of 193

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	IV fluid bolus
	External pacing
	Defibrillation
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Dashboard

Overall score: **0%**

1 -

Question 100 of 193

□ □

An 80-year-old man was brought to hospital after a collapse. A carer at his nursing home reports he became pale and slumped unresponsive in a chair but regained consciousness after a few minutes. His past medical history includes hypertension, hypothyroidism, mild dementia and a previous seizure 15 years ago.

Paramedics at the scene reported a heart rate of 34/min which has now resolved. Examination reveals normal heart sounds, capillary refill of 3 seconds and a regular pulse of 60/min. Which of his medications may be responsible for the collapse?

	Bendroflumethiazide
	Triamterene
	Levothyroxine
	Sodium valproate
	Donepezil

Dashboard

Overall score: 0%

1 -

Question 100 of 193

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Dashboard

Overall score: **0%**

1 -

Question 101 of 193

□ □

A 45 year-old man is referred to the nephrologists for investigation of chronic kidney disease. He has a past medical history of hypertension, type 2 diabetes, and Parkinsons disease, and his medication comprises ramipril, metformin, and bromocriptine.

Review of blood tests shows that the glomerular filtration rate (GFR) has steadily fallen from 85 to 44ml/min/1.73m² over the last year.

On questioning, his only symptom is chronic back pain which has been getting worse over the last year. On examination, both kidneys are easily palpable.

Routine investigations are as follows:

Hb	12.1 g/dl
MCV	94.2 fl
Platelets	264 x10 ⁹ /l
WCC	7.1 x10 ⁹ /l
Na	137mmol/l
K	4.6 mmol/l
Urea	13.8 mmol/l
Creatinine	157 mol/l
eGFR	44 ml/min/1.73m ²
ALT	24 IU/l
ALP	78 IU/l
Bilirubin	6 mol/l
Albumin	37 g/l

Total protein	64 g/l
Serum protein electrophoresis	pending
Urine dipstick	negative for blood, protein, leucocytes, and nitrites

Abdominal ultrasound shows bilateral hydronephrosis.

What is the most likely cause of his chronic kidney disease?

	Multiple myeloma
	Diabetic nephropathy
	Bladder cancer
	Retroperitoneal fibrosis
	Autosomal dominant polycystic kidney disease

Dashboard

Overall score: 0%

1 -

Question 101 of 193

□ □

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□ Question 101 of 193

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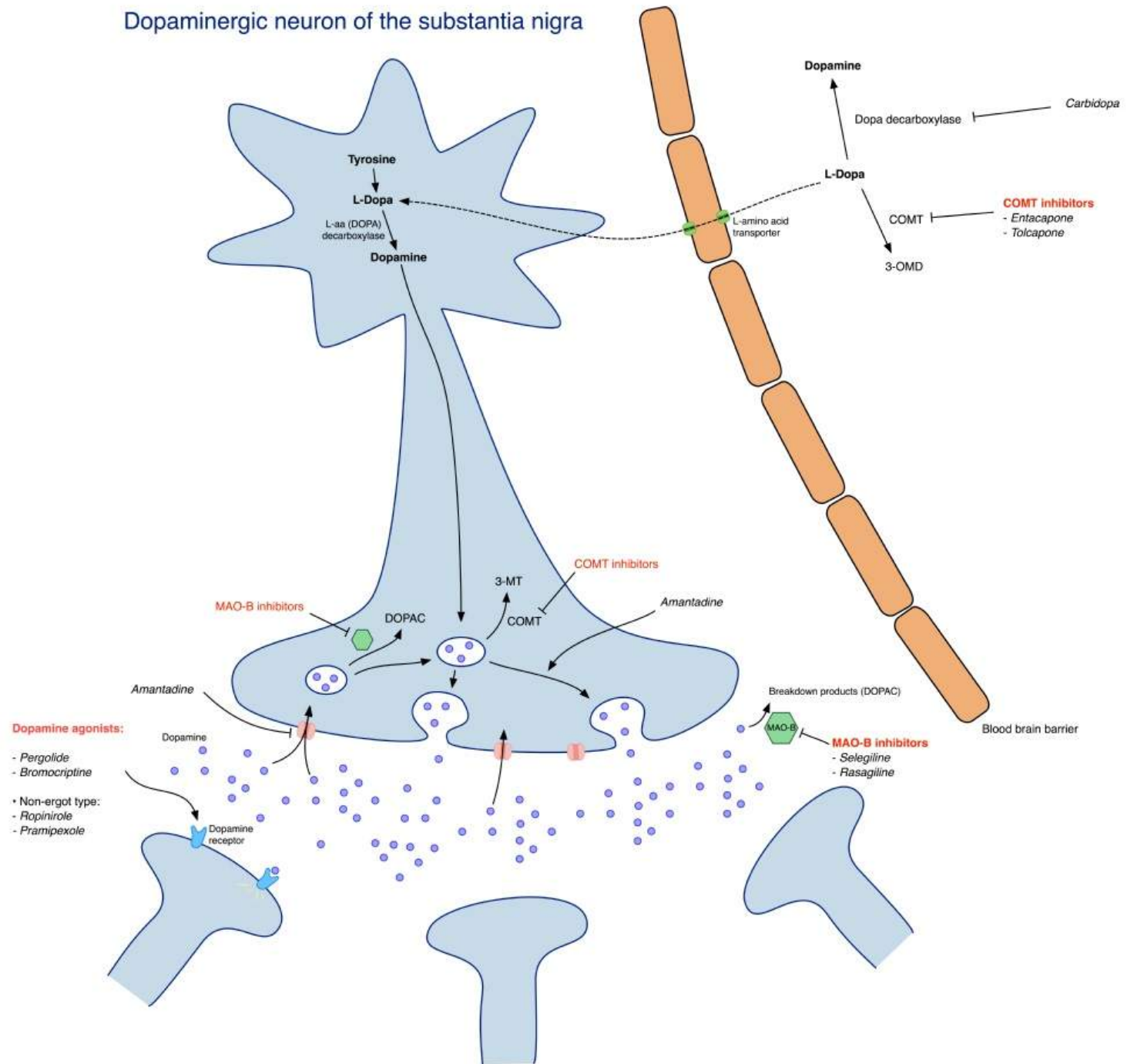
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	Bladder cancer
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Dashboard
<p>Overall score: 0%</p> <p>1 -</p>

Dopaminergic neuron of the substantia nigra



□ Question 102 of 193



A 56-year-old male was admitted to the Medical Admission Unit with shortness of breath. It was of relatively sudden onset having developed over the course of the last five days. It initially occurred with severe exertion but gradually progressed such that by the time of admission he was breathless at rest with significant orthopnoea and paroxysmal nocturnal dyspnoea. His past medical history included angina for which he was awaiting hospital investigation, hypertension, hypercholesterolaemia and a transient ischaemic attack three years ago. Over the course of the last few weeks, he had been seeing his GP with poor blood pressure control. In addition to felodipine M/R 5mg OD, indapamide 25mg OD and bisoprolol 7.5 mg OD the GP introduced ramipril 2.5mg OD two weeks ago. His other medication comprised of aspirin 75 mg OD, dipyridamole M/R 200mg BD, GTN spray PRN and simvastatin 40mg OD. He smoked 40 cigarettes per day and consumed 38 units of alcohol per week.

On examination to the Medical Admission Unit, he was short of breath at rest, with a respiratory rate of 26/min and oxygen saturations of 92% on air. His blood pressure was 158/78 mmHg and heart rate 54 bpm. Examination of the cardiovascular system revealed the presence of normal heart sounds, a JVP of 4 cm and the absence of pedal oedema. Examination of the respiratory system revealed bibasal crackles, whilst examination of the gastrointestinal and neurological systems was unremarkable.

Initial investigations revealed the following results:

Na ⁺	138 mmol/l
K ⁺	4.6 mmol/l
Urea	18.9 mmol/l
Creatinine	245 µmol/l
Glucose	5.7 mmol/l
Troponin I	<0.05
CRP	2 mg/l
ESR	6 mm/hr

ECG: normal sinus rhythm 56 bpm

Chest x-ray: bilateral pulmonary oedema, normal heart diameter

Urinalysis: NAD

Transthoracic echocardiogram: normal systolic function, presence of aortic stenosis with pressure gradient of 18mmHg, as well as mild mitral regurgitation.

Treatment was commenced with IV furosemide 80mg OD and GTN, as well as IV diamorphine 2.5 mg OD with excellent effect and the patient recovered over the next two days.

What is the next best investigation to determine the cause of this gentleman's symptoms?

	Coronary angiography
	Renal angiography
	Myocardial perfusion scanning
	Renal magnetic resonance angiography
	No further investigations required

Dashboard

Overall score: 0%

1 -

□ Question 102 of 193



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	Renal angiography
	Myocardial perfusion scanning
	Renal magnetic resonance angiography
	No further investigations required

Dashboard

Overall score: 0%

1 -

Question 103 of 193

□ □

A 75 year old male presents with increasing chest pain on exertion. He was first diagnosed with stable angina 7 years ago. His past medical history includes hypercholesterolaemia and hypertension. His drugs history includes bisoprolol and diltiazem, which he has been taking for the past 3 years. A recent angiogram was arranged as an outpatient by his GP, demonstrating stenoses in his left circumflex artery, distal right coronary artery and mid-left anterior descending artery. What is the most appropriate long-term treatment of choice for his angina?

	Coronary artery bypass graft
	Percutaneous coronary intervention with 3 stents
	Addition of ivabradine
	Addition of nicorandil
	Addition of ranolazine

Dashboard

Overall score: 0%

1 -

Question 103 of 193

□ □

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	Coronary artery bypass graft
	Percutaneous coronary intervention with 3 stents
	Addition of ivrabradine
	Addition of nicorandil
	Addition of ranolazine

Dashboard

Overall score: **0%**

1 -

Question 104 of 193

□ □

A 73-year-old is referred to the pulmonary hypertension team after undergoing an echocardiogram. She had initially been admitted after a 4-day history of exertional dyspnoea. A chest x-ray revealed bilateral pulmonary oedema. She demonstrated acute ischaemic changes on her ECG. Her past medical history includes type 2 diabetes mellitus, hypertension, hypercholesterolaemia and a previous NSTEMI in 2010. An echocardiogram demonstrated moderate to severe LV dysfunction, with a pulmonary arterial pressure of 83 mmHg (normal <25 mmHg). What is the most appropriate next diagnostic investigation?

	No further investigations for pulmonary hypertension
	V/Q scan
	CTPA
	Right and left heart catheterisation
	Lung function tests

Dashboard

Overall score: 0%

1 -

□ Question 104 of 193

□ □

A 73-year-old is referred to the pulmonary hypertension team after undergoing an echocardiogram. She had initially been admitted after a 4-day history of exertional dyspnoea. A chest x-ray revealed bilateral pulmonary oedema. She demonstrated acute ischaemic changes on her ECG. Her past medical history includes type 2 diabetes mellitus, hypertension, hypercholesterolaemia and a previous NSTEMI in 2010. An echocardiogram demonstrated moderate to severe LV dysfunction, with a pulmonary arterial pressure of 83 mmHg (normal <25 mmHg). What is the most appropriate next diagnostic investigation?

	No further investigations for pulmonary hypertension
	V/Q scan
	CTPA
	Right and left heart catheterisation
	Lung function tests

Dashboard

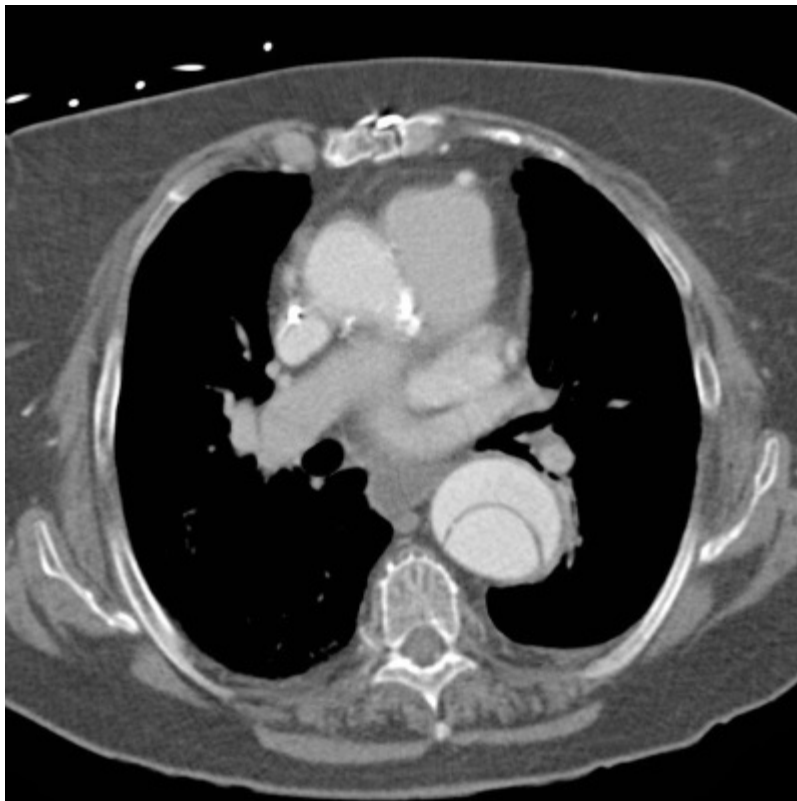
Overall score: **0%****1** -

□ Question 105 of 193

□ □

A 74-year-old man with a history of depression, chronic obstructive pulmonary disease and hypertension is admitted to hospital with severe central chest pain. He has no history of ischaemic heart disease or similar chest pains in the past. On admission blood pressure is 160/98 mmHg, pulse 110/min, respiratory rate 18/min and oxygen saturations are 93% on room air.

A CT chest (with contrast) is shown below:



© Image used on license from Radiopaedia



What is the most appropriate management?

--	--

	Chest drain
	Cardiothoracic surgery
	Intravenous labetalol
	Thrombolysis with tenecteplase
	Low-molecular weight heparin

Dashboard

Overall score: 0%

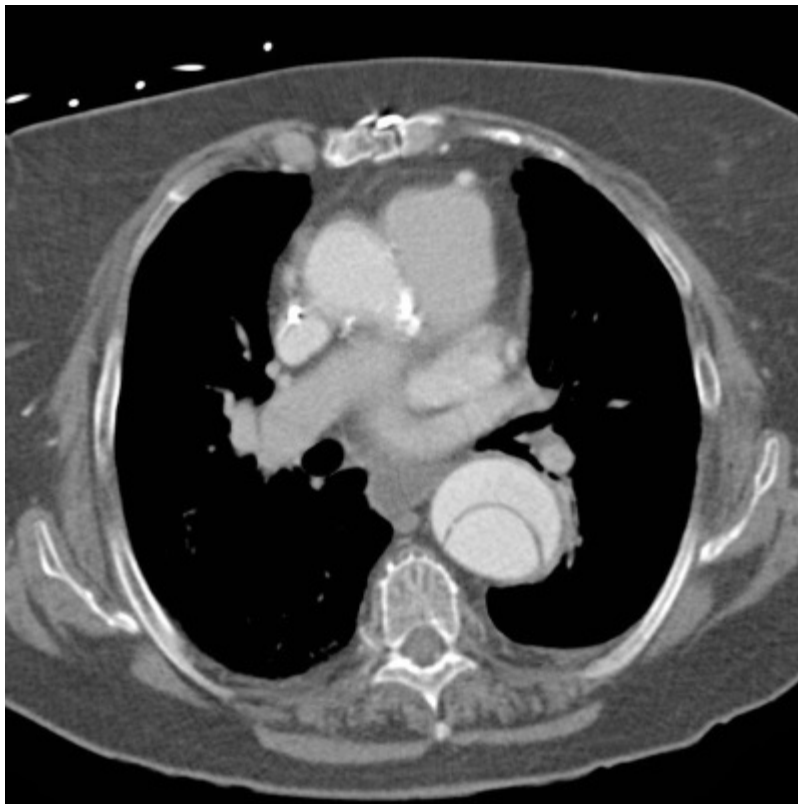
1 -

□ Question 105 of 193

□ □

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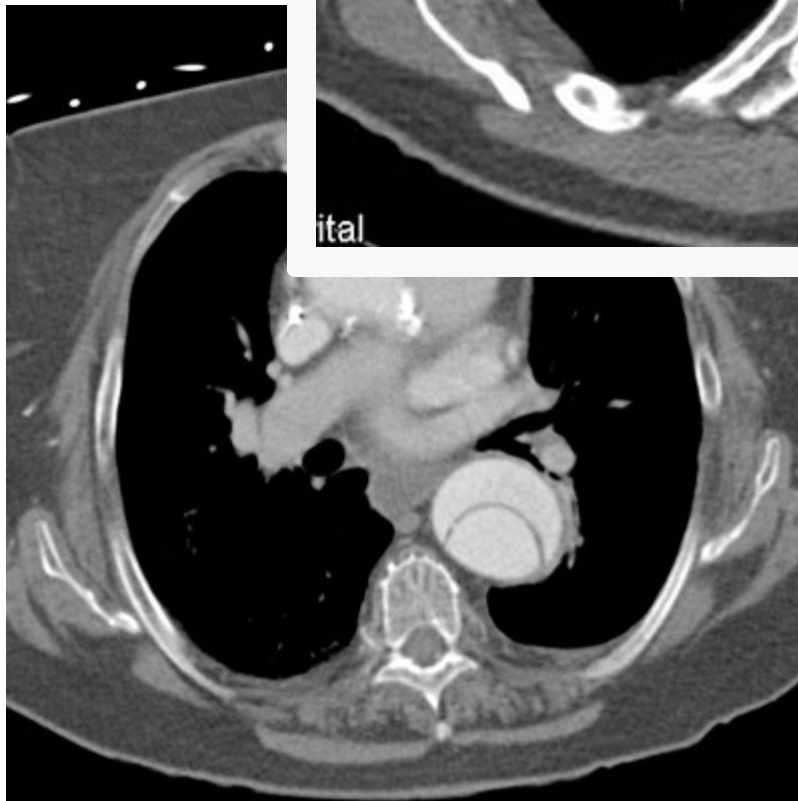
Dashboard

Overall score: **0%**
1 -

□ Question 105 of 193

A 74-year-old man with a history of depression, chest pain, is admitted to hospital with severe central chest pain. He has no other significant medical history. On admission blood pressure is 160/98 mmHg, pulse 100 bpm, and he is on room air.

A CT chest (with contrast) is shown below:



© Image used on license from Radiopaedia

What is the most appropriate management?

	Chest drain
	Cardiothoracic surgery
	Intravenous labetalol
	Thrombolysis with tenecteplase
	Low-molecular weight heparin

Dashboard

Overall score: **0%**
1 -

Question 105 of 193

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© Image used on license from Radiopaedia

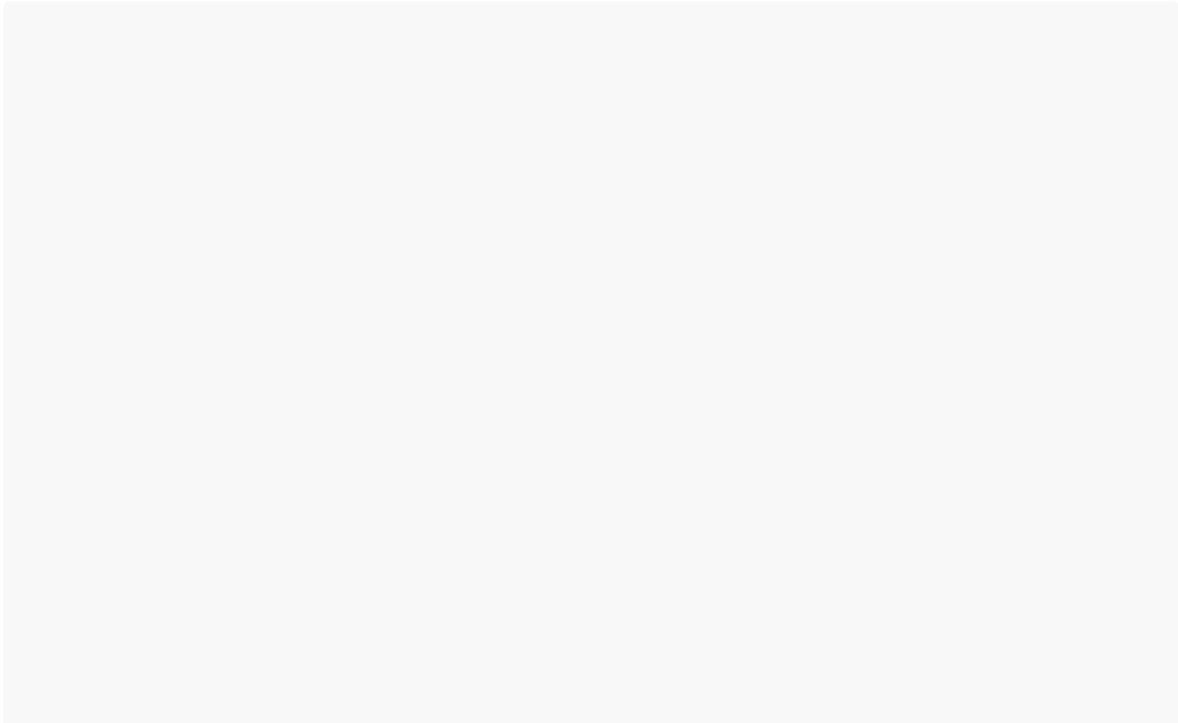
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	Chest drain
	Cardiothoracic surgery
	Intravenous labetalol
	Thrombolysis with tenecteplase
	Low-molecular weight heparin

Dashboard

Overall score: 0%

1 -





Question 106 of 193

□ □

A 64-year-old man is admitted to the Acute Medical Unit with fever after his GP had noticed a new murmur on examination. For the past two weeks he has been complaining of lethargy and anorexia but attributed these symptoms to the 'flu.

On examination a pansystolic murmur is noted. Heart rate is 90/min, blood pressure 110/66 mmHg and temperature 38.4°C. Petechiae are noted on the upper limbs.

A chest x-ray and urine dip are unremarkable.

What is the most appropriate antibiotic therapy whilst awaiting further results?

	IV benzylpenicillin
	IV vancomycin
	IV amoxicillin
	IV vancomycin + low-dose gentamicin
	IV flucloxacillin + low-dose gentamicin

Dashboard

Overall score: 0%

1 -

Question 106 of 193

□ □

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	IV amoxicillin
	IV vancomycin + low-dose gentamicin
	IV flucloxacillin + low-dose gentamicin

Dashboard

Overall score: **0%**

1 -

Question 107 of 193

An 18-year-old man presents with difficulty in breathing while trying out for his university frisbee team. He has always had a mild exertional dyspnoea in childhood but put it down to being unfit as a child. There is no family history of sudden death or any other cardiac problems.

On examination his respiratory rate is 18, oxygen saturations are 96% on air, heart rate of 70 bpm, and blood pressure of 126/76 mmHg. He is slender, and on cardiovascular examination, there is a systolic ejection murmur heard in the left second intercostal space at the sternal edge. ECG demonstrates sinus rhythm, with tall peaked P waves and a prolonged PR interval.

He undergoes a cardiac catheterisation procedure, results are as follows:

	Pressures	Oxygen saturation
Superior Vena Cava (SVC)	- 75%	
Inferior Vena Cava (IVC)	-	78%
Right Atrium	-	90%
Right Ventricle	50/8mmHg	89%
Pulmonary Artery	40/15mmHg	90%
Left Atrium	-	98%
Left Ventricle	130/15mmHg	95%
Aorta	126/72mmHg	95%

What is the most likely diagnosis?

<input type="checkbox"/>	Ostium Secundum Atrial Septal Defect
<input type="checkbox"/>	Ostium Primum Atrial Septal Defect
<input type="checkbox"/>	Hypertrophic Obstructive Cardiomyopathy

	Patent ductus arteriosus
	Fallot's tetralogy

Dashboard

Overall score: **0%**

1 -

Question 107 of 193



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Aorta	126/72mmHg	95%

What is the most likely diagnosis?

	Ostium Secundum Atrial Septal Defect
	Ostium Primum Atrial Septal Defect
	Hypertrophic Obstructive Cardiomyopathy

	Patent ductus arteriosus
	Fallot's tetralogy

Dashboard

Overall score: **0%**
1 -

Question 108 of 193



A 71-year-old patient presents to the Emergency Department with a 30 minute history of crushing central chest pain. ECG shows tall R waves in V1-2. Which coronary territory is likely to be affected?

	Lateral
	Posterior
	Anteroseptal
	Anterolateral
	Inferior

Dashboard

Overall score: **0%**

1 -

Question 108 of 193

□ □

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	Anterolateral
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Dashboard

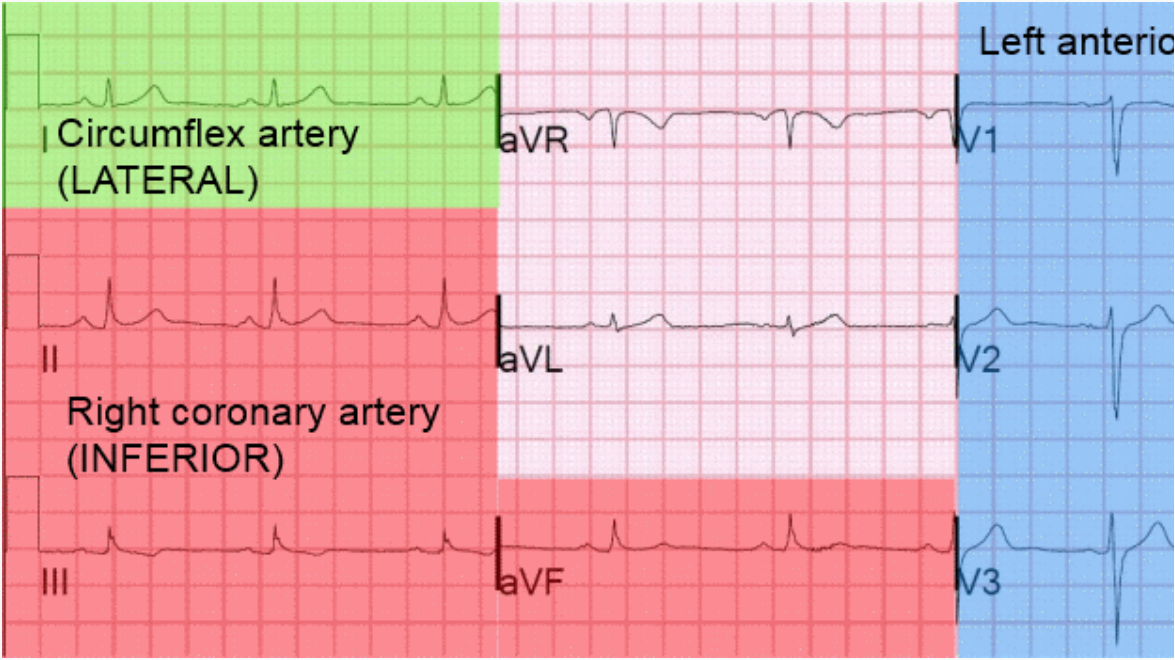
Overall score: **0%**

1 -

Question 108 of 193

A 71-year-old patient presents with chest pain. The ECG shows tall R waves in

	Lateral
	Posterior
	Anteroseptal
	Anterolateral
	Inferior



Dashboard

Overall score: 0%

1 -

Question 109 of 193

□ □

A 32-year-old man is reviewed in the ischaemic heart disease clinic having suffered an inferior myocardial infarction. He has been diagnosed with heterozygous familial hypercholesterolaemia and started on 80mg per day of atorvastatin. His LDL cholesterol is still 3.5 mmol/l.

Which of the following is the most appropriate next intervention?

	Add cholestyramine
	Add evolocumab
	Add fenofibrate
	Add nicotinic acid
	Change atorvastatin to rosuvastatin

Dashboard

Overall score: 0%

1 -

Question 109 of 193

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	Change atorvastatin to rosuvastatin

Dashboard

Overall score: **0%**

1 -

□ Question 110 of 193



A 78-year-old man is admitted with palpitations and shortness of breath. He denies chest pain apart from mild angina on exertion. He can't quite recall when the symptoms started but he felt normal a week ago. He is sent to the medial admissions unit for serial troponins but an ECG on arrival shows no ischaemic changes.

His background includes hypertension, atrial fibrillation, recurrent transient ischaemic attacks, and moderate left ventricular systolic dysfunction. He takes carvedilol, dabigatran and digoxin daily. In addition the patient's GP has recently doubled the daily dose of furosemide.

The ward nursing staff ask you to review the patient as he says the palpitations have suddenly become much worse. His blood pressure is stable.

Na ⁺	140 mmol/l
K ⁺	3.2 mmol/l
Urea	9.9 mmol/l
Creatinine	188 mol/l

A repeat ECG shows monomorphic ventricular tachycardia. The on-call cardiologist agrees that this patient should receive digibind. However the nursing staff tell you that digibind will take 30 minutes to arrive on the ward.

What in the next step in this patient's management?

	DC cardioversion
	IV Metoprolol
	IV Atropine
	IV Phenytoin
	Proceed to PCI

Dashboard

Overall score: **0%**

1 -

□ Question 110 of 193



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	IV Phenytoin
	Proceed to PCI

Dashboard

Overall score: **0%**

1 -

□ Question 111 of 193

□ □

An 85-year-old man is reviewed in cardiology clinic as part of the ongoing assessment for possible intervention for severe aortic stenosis. The patient had been under surveillance for aortic valve disease over the previous 10 years and a progressive worsening of aortic valve function had been documented. However, the patient had remained asymptomatic until the onset of pre-syncope symptoms on exertion around 6 months previously. At that time, the patient had expressed interest in undergoing either surgical aortic valve replacement or transcatheter aortic valve insertion if recommended by his doctors. Subsequently, the patient had undergone a variety of investigations to assess the risk associated with the above procedures.

The patient was in good general health and lived independently in a bungalow with his wife. He had no other history of cardiac disease. The patient had been diagnosed with type 2 diabetes mellitus 10 years previously, which was well controlled on oral metformin and a daily long-acting insulin injection. He also took ramipril as the treatment for hypertension and chronic kidney disease. The patient was a lifetime non-smoker and rarely consumed alcohol.

A summary of the investigations undergone by the patient is given below.

Haemoglobin	145 g / dL
Mean cell volume	89.1 fL
White cell count	4.3 x 10 ⁹ / microlitre
Platelets	198 x 10 ⁹ / microlitre
Urea	7.8 mmol / L
Creatinine	133 micromol / L
Sodium	143 mmol / L
Potassium	3.9 mmol / L

Investigation	Result
Transthoracic echocardiogram	Severe aortic stenosis (valve area 0.9 cm ²); no other valve disease; normal systolic function

Coronary angiography	Minor irregularities only; no flow-limiting stenosis
Iliofemoral angiography	No significant atherosclerosis
Pulmonary function tests	No evidence significant obstructive or restrictive lung disease

Following the above assessment, surgical aortic valve replacement was estimated to carry a 4.0 % risk of mortality and 1.9 % risk of permanent stroke (intermediate risk). No contraindications to transfemoral or transapical transcatheter aortic valve insertion were identified.

What is the recommended choice of intervention for the patient's aortic stenosis?

<input type="checkbox"/>	Transfemoral transcatheter aortic valve insertion
<input type="checkbox"/>	Transapical transcatheter aortic valve insertion
<input type="checkbox"/>	Surgical aortic valve replacement and transcatheter aortic valve insertion inappropriate
<input type="checkbox"/>	Surgical aortic valve replacement with mechanical valve
<input type="checkbox"/>	Surgical aortic valve replacement with bioprosthetic valve

Dashboard

Overall score: **0%**

1 -

□ Question 111 of 193

□ □

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<input type="radio"/>	Transapical transcatheter aortic valve insertion
<input type="radio"/>	Surgical aortic valve replacement and transcatheter aortic valve insertion inappropriate
<input type="radio"/>	Surgical aortic valve replacement with mechanical valve
<input type="radio"/>	Surgical aortic valve replacement with bioprosthetic valve

Dashboard

Overall score: **0%**

1 -

Question 112 of 193

□ □

A 72-year-old male presents with a five hour history of left sided chest pain, radiating to his left arm. He also complains of sweatiness in both his hands and has vomited three times in the last 2 hours. ECG demonstrates ST depression in II, III and aVF, troponin is 0.78 (normal range <0.03). On examination, he is alert but extremely clammy. You note his pulse at the radial artery is 35/ minute and regular. His BP on the cardiac monitor is 120/67. An NSTEMI is diagnosed and the patient is taken to the catheter laboratory for reperfusion therapy. Which coronary artery is most likely to be occluded?

<input type="checkbox"/>	Left anterior descending artery
<input type="checkbox"/>	Left circumflex artery
<input type="checkbox"/>	Obtuse marginal branch artery 1
<input type="checkbox"/>	Obtuse marginal branch artery 2
<input type="checkbox"/>	Right coronary artery

Dashboard

Overall score: 0%

1 -

□ Question 112 of 193

□ □

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	Left anterior descending artery
	Left circumflex artery
	Obtuse marginal branch artery 1
	Obtuse marginal branch artery 2
	Right coronary artery

Dashboard

Overall score: **0%****1** -

Question 113 of 193

□ □

A 34-year-old male presents with increased shortness of breath on minimal exertion associated with reduced exercise tolerance. He was diagnosed with a 'heart condition' 4 years ago after three episodes of loss of consciousness. His only other past medical history is asthma, which is well controlled on a Seretide 250 inhaler. His last echocardiogram demonstrates asymmetric left ventricular and septal wall hypertrophy, associated with an increased left ventricular outflow tract gradient and systolic anterior wall motion. He was started on verapamil by his cardiologist 2 years ago but over the past 3 months, he reports a deterioration of his shortness of breath associated with increasing lower limb swelling. Which treatment is most appropriate?

	Propranolol
	Disopyramide
	Ramipril
	DDDR pacemaker insertion
	Cardiac myectomy

Dashboard

Overall score: **0%**

1 -

Question 113 of 193

□ □

A 34-year-old male presents with increased shortness of breath on minimal exertion associated with reduced exercise tolerance. He was diagnosed with a 'heart condition' 4 years ago after three episodes of loss of consciousness. His only other past medical history is asthma, which is well controlled on a Seretide 250 inhaler. His last echocardiogram demonstrates asymmetric left ventricular and septal wall hypertrophy, associated with an increased left ventricular outflow tract gradient and systolic anterior wall motion. He was started on verapamil by his cardiologist 2 years ago but over the past 3 months, he reports a deterioration of his shortness of breath associated with increasing lower limb swelling. Which treatment is most appropriate?

	Propranolol
	Disopyramide
	Ramipril
	DDDR pacemaker insertion
	Cardiac myectomy

Dashboard

Overall score: **0%**

1 -

Question 114 of 193

□ □

A 83 year old lady presents to heart failure follow up clinic. She has a history of NSTEMI and gallstones. Her symptoms are reasonably poorly controlled. She is able to walk around her bungalow, but struggles to walk to her local shops 100m away due to breathlessness.

She had recently seen her GP who added spironolactone to her regular medications due to persistent hypokalaemia. Her potassium has since normalised.

Her latest echo reveals an ejection fraction of 25%. Her ECG is sinus rhythm Her last BNP was 1000 pg/ml.

She is currently taking senna, ramipril 10mg, aspirin 75m, frusemide 40mg bd, simvastatin 40mg, and spironolactone 50mg.

Her observations at clinic are:

- oxygen saturations: 94% on room air
- blood pressure: 126/66 mmHg
- heart rate: 84/min

Which additional medication would be beneficial?

	Ivabradine
	Bisoprolol
	Digoxin
	Diltiazem
	Atenolol

Overall score: **0%**

1 -

Question 114 of 193

□ □

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Which additional medication would be beneficial?

	Ivabradine
	Bisoprolol
	Digoxin
	Diltiazem
	Atenolol

Overall score: **0%**

1 -

Question 115 of 193

□ □

Mr Smith is a 59-year-old man who presents to the walk-in clinic complaining of central chest pain that is sharp in nature and is associated with a low-grade fever of 37.9°C. He complains that it is worse when he goes to bed at night and better when he sits forward. He denies any recent infections or trauma to the chest. Upon reading the patient's notes the following entry is found dated 2 weeks previously. It reads as follows:

Mr Smith presented to the emergency department with central crushing chest pain that radiated to his jaw that started 40 minutes ago. The admitting ECG revealed marked ST-elevations in leads II, III, and AVF. He was sent directly for percutaneous coronary intervention where a stent was inserted into the right coronary artery...

Given the history and the current presenting complaint, what is the most likely diagnosis?

	Ventricular free wall rupture
	Myocardial infarction
	Dressler's syndrome
	Viral pericarditis
	Pneumonia

Dashboard

Overall score: 0%

1 -

Question 115 of 193

□ □

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	Ventricular free wall rupture
	Myocardial infarction
	Dressler's syndrome
	Viral pericarditis
	Pneumonia

Dashboard

Overall score: **0%**

1 -

□ Question 116 of 193

□ □

A 65 year old obese female with known type 2 diabetes mellitus presents with one week history of unstable angina. Her troponin was negative and she presented with no dynamic ECG changes. She undergoes an angiogram and a drug-eluting stent was inserted into a 90% stenosis of his LAD. On discharge, what should her anticoagulation regime be?

	Aspirin and clopidogrel for 1 month, followed by lifelong aspirin
	Aspirin and clopidogrel for 1 month, followed by lifelong clopidogrel
	Aspirin and clopidogrel for 1 year, followed by lifelong aspirin
	Aspirin only, lifelong
	Clopidogrel only, lifelong

Dashboard

Overall score: 0%

1 -

□ Question 116 of 193

□ □

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	Aspirin only, lifelong
	Clopidogrel only, lifelong

Dashboard

Overall score: **0%**

1 -

□ Question 117 of 193



A 73-year-old man with a history of severe biventricular heart failure comes to the clinic for review. He can only walk around 100 metres to the bus stop and climbs the stairs once per day only. Medication includes ramipril 10mg, furosemide 80mg, bisoprolol 10mg, spironolactone 25mg, aspirin and atorvastatin. On examination his blood pressure is 123/82 mmHg, pulse is 85 beats per minute at rest. He has bilateral basal crackles on auscultation of the chest and mild pitting oedema of both ankles.

Investigations

Hb	122 g/l	Na ⁺	134 mmol/l	Bilirubin	11 µmol/l
Platelets	190 * 10 ⁹ /l	K ⁺	5.0 mmol/l	ALP	105 u/l
WBC	7.4 * 10 ⁹ /l	Urea	11.2 mmol/l	ALT	33 u/l
Neuts	4.5 * 10 ⁹ /l	Creatinine	142 µmol/l	γGT	56 u/l
Lymphs	1.2 * 10 ⁹ /l			Albumin	38 g/l
Eosin	0.5 * 10 ⁹ /l				

Chest x-ray: Cardiomegaly, bilateral upper lobe diversion

ECG: Left bundle branch block, ventricular rate 85

ECHO: Ejection fraction 31%

Which of the following is the most appropriate next step with regards to his heart failure medication?

	Add digoxin
	Add valsartan
	Add ivabradine

	Increase furosemide by 40mg per day
	Increase spironolactone to 100mg per day

Dashboard

Overall score: **0%**

1 -

□ Question 117 of 193



A 73-year-old man with a history of severe biventricular heart failure comes to the clinic for review. He can only walk around 100 metres to the bus stop and climbs the stairs once per day only. Medication includes ramipril 10mg, furosemide 80mg, bisoprolol 10mg, spironolactone 25mg, aspirin and atorvastatin. On examination his blood pressure is 123/82 mmHg, pulse is 85 beats per minute at rest. He has bilateral basal crackles on auscultation of the chest and mild pitting oedema of both ankles.

Investigations

Hb	122 g/l	Na ⁺	134 mmol/l	Bilirubin	11 µmol/l
Platelets	190 * 10 ⁹ /l	K ⁺	5.0 mmol/l	ALP	105 u/l
WBC	7.4 * 10 ⁹ /l	Urea	11.2 mmol/l	ALT	33 u/l
Neuts	4.5 * 10 ⁹ /l	Creatinine	142 µmol/l	γGT	56 u/l
Lymphs	1.2 * 10 ⁹ /l			Albumin	38 g/l
Eosin	0.5 * 10 ⁹ /l				

Chest x-ray: Cardiomegaly, bilateral upper lobe diversion

ECG: Left bundle branch block, ventricular rate 85

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	Add ivabradine

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	Increase spironolactone to 100mg per day

Dashboard

Overall score: **0%**
1 -

□ Question 118 of 193



A 37-year-old gentleman is referred to the cardiology clinic with a 7-month history of bilateral foot pain. Initially, the pain only occurred towards the end of his daily commute; improving when he sat at his desk, but over the past 3 weeks his symptoms have progressed. The pain is now provoked by walking short distances and has occasionally occurred at rest. He describes being woken by the pain at night, although he is able to obtain relief by standing on the cool tiles in his bathroom. He eventually decided to see his GP when he developed similar pain in his right wrist 10 days ago.

His past medical history is unremarkable. There is no history of hypertension, dyslipidaemia or diabetes. He is a current smoker with a 20 pack year history. He drinks alcohol in moderation.

On examination, both feet are noted to be smooth and hairless. The right dorsalis pedis is difficult to feel and the medial 3 toes are cold and dusky. Urgent angiography is performed and shows a number of distal stenoses in the right limb affecting the anterior and posterior tibial arteries as well as the distal fibular artery. A number of similar stenoses are seen in the contralateral limb with 'corkscrew' collateral formation.

Blood tests are as follows:

Hb	130 g/l	Na ⁺	139 mmol/l
Platelets	322*10 ⁹ /l	K ⁺	4.1 mmol/l
WBC	9.1*10 ⁹ /l	Urea	5.3 mmol/l
Neuts	6.2*10 ⁹ /l	Creatinine	113 µmol/l
Lymphs	2.1*10 ⁹ /l	CRP	19 mg/l
Eosin	0.1*10 ⁹ /l		

MPO	negative
PR3	negative
anti-cardiolipin	negative

What is the most likely diagnosis?

	Peripheral vascular disease
	Microscopic polyangiitis
	Takayasu arteritis
	Thromboangiitis obliterans
	Polyarteritis nodosa

Dashboard

Overall score: **0%**

1 -

□ Question 118 of 193



A 37-year-old gentleman is referred to the cardiology clinic with a 7-month history of bilateral foot pain. Initially, the pain only occurred towards the end of his daily commute; improving when he sat at his desk, but over the past 3 weeks his symptoms have progressed. The pain is now provoked by walking short distances and has occasionally occurred at rest. He describes being woken by the pain at night, although he is able to obtain relief by standing on the cool tiles in his bathroom. He eventually decided to see his GP when he developed similar pain in his right wrist 10 days ago.

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	Peripheral vascular disease
	Microscopic polyangiitis
	Takayasu arteritis
	Thromboangiitis obliterans
	Polyarteritis nodosa

Dashboard

Overall score: **0%**

1 -

□ Question 119 of 193

□ □

A medical opinion was sought from the obstetrics team regarding a 38-year-old 28 weeks pregnant lady. A routine blood pressure check revealed a blood pressure of 158/98 mmHg. Other than suffering from hyperemesis gravidarum, her pregnancy had proceeded without complication. She specifically denied the presence of headaches, vomiting, change in vision, abdominal pain, seizures or bleeding per vagina. She had noticed no change in the frequency of foetal movements, and her 20-week antenatal scan revealed the presence of a healthy foetus with a rate of growth within the expected range. Her past medical history was unremarkable; she was a non-smoker and did not consume alcohol. Her blood pressure at the booking antenatal appointment was 148/88 mmHg. Her sister suffered from pre-eclampsia during her pregnancy necessitating delivery by caesarean section.

Examination revealed the presence of a well 28-week old pregnant lady. Her blood pressure was indeed 158/98 mmHg, her heart rate was 86 bpm and temperature 36.5°C. Examination of the cardiovascular system revealed normal heart sounds, a JVP of 3cm and the absence of pedal oedema. Examination of the respiratory system was unremarkable. Examination of the gastrointestinal system revealed the presence of a symphysiofundal height appropriate for the stage of gestation with easily obtainable foetal heart sounds on hand held Doppler examination. Examination of the neurological system was unremarkable with normal reflexes, cranial nerve function and peripheral motor and sensory function. Urinalysis revealed no abnormality.

What is the next best management step?

	Commence ramipril
	Commence labetalol
	Commence indapamide
	Commence magnesium sulphate
	Transfer to high dependency unit to observe for signs of pre eclampsia

Overall score: **0%**

1 -

Question 119 of 193

□ □

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What is the next best management step?

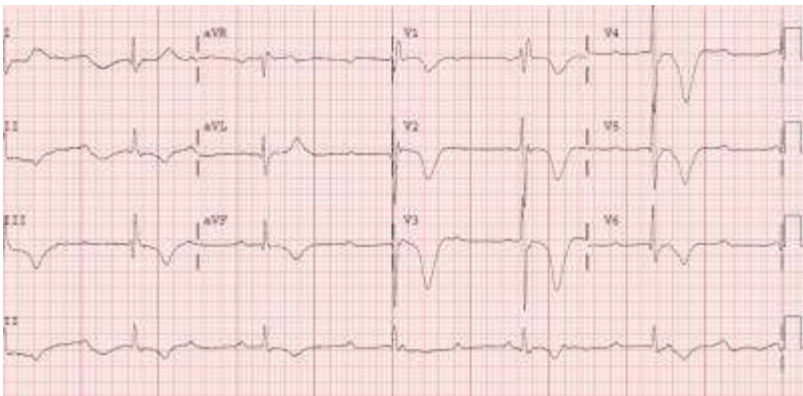
	Commence ramipril
	Commence labetalol
	Commence indapamide
	Commence magnesium sulphate
	Transfer to high dependency unit to observe for signs of pre eclampsia

Overall score: **0%**

1 -

Question 120 of 193

A 56-year-old man is brought to the Emergency Department. He works as a window cleaner. His colleague describes him suddenly falling from the ladder without warning. On admission he is conscious with a bradycardia of around 36/min. His blood pressure is 110/62 mmHg and he is well perfused with no signs of heart failure. An ECG is taken on account of his bradycardia:



© Image used on license from Dr Smith, University of Minnesota



A previous ECG taken four months ago was completely normal. What is the most likely diagnosis?

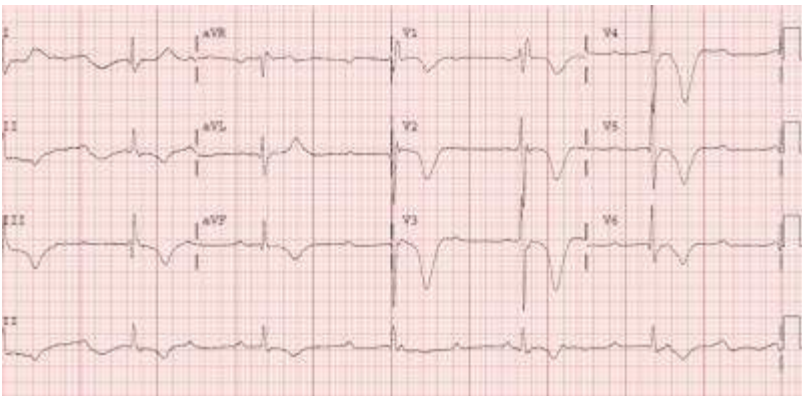
	Sick sinus syndrome
	Stokes-Adams attack with associated complete heart block
	Myocardial infarction with new left bundle branch block
	Second-degree atrioventricular block (Mobitz II)
	Second-degree atrioventricular block (Mobitz I / Wenckebach)

Overall score: **0%**

1 -

Question 120 of 193

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© Image used on license from Dr Smith, University of Minnesota



A previous ECG taken four months ago was completely normal. What is the most likely diagnosis?

	Sick sinus syndrome
	Stokes-Adams attack with associated complete heart block
	Myocardial infarction with new left bundle branch block
	Second-degree atrioventricular block (Mobitz II)
	Second-degree atrioventricular block (Mobitz I / Wenckebach)

Overall score: **0%**

1 -

□ Question 121 of 193



A 58-year-old woman was admitted with a stroke following a month's history of recurrent fevers, anorexia and weight loss. On examination, she had a left-sided hemiparesis and facial droop. Cardiovascular examination revealed splinter haemorrhages in 5 of her fingers across both hands, and a soft diastolic murmur heard loudest in expiration over the aortic area.

A trans-thoracic echocardiogram showed an oscillating vegetation on an aortic leaflet, in the path of regurgitant jets. Two blood cultures were positive for *Streptococci* spp. She was diagnosed with infective endocarditis and started on intravenous benzylpenicillin 1.2g every 4 hours and gentamicin 1mg/kg twice daily therapy.

She was reviewed after 5 days on antibiotic therapy with the following results.

Na ⁺	139 mmol/l
K ⁺	4.7 mmol/l
Urea	14.2 mmol/l
Creatinine	178 µmol/l
Serum bilirubin	16 µmol/l
Serum alkaline phosphatase	115 IU/l
Serum aspartate aminotransferase	18 IU/l
C Reactive protein	89 mg/l
Haemoglobin	138 g/l
White cell count	13.6 x 10 ⁹ /L
INR	1.1
Blood cultures	<i>Streptococcus Bovis</i>
Penicillin Minimum Inhibitory Concentration (MIC)	0.6 mg/L (high)
ECG	Prolonged PR interval (not present on admission ECG)

What is the next most important management?

	Increase antibiotics to intravenous benzylpenicillin 2.4g every 4 hours and gentamicin 1mg/kg twice daily
	Organise an urgent colonoscopy
	Switch antibiotics to ceftriaxone 2g once daily
	Refer to cardiothoracic surgeons
	Organise urgent trans-oesophageal echocardiogram

Dashboard

Overall score: 0%

1 -

□ Question 121 of 193



A 58-year-old woman was admitted with a stroke following a month's history of recurrent fevers, anorexia and weight loss. On examination, she had a left-sided hemiparesis and facial droop. Cardiovascular examination revealed splinter haemorrhages in 5 of her fingers across both hands, and a soft diastolic murmur heard loudest in expiration over the aortic area.

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	Refer to cardiothoracic surgeons
	Organise urgent trans-oesophageal echocardiogram

Dashboard

Overall score: **0%**

1 -

Question 122 of 193



A 58 year-old man with a background of ischaemic heart disease and Crohn's disease has developed colonic enterocutaneous fistulae. He is admitted to hospital under the surgical team and a temporary ileostomy is formed to defunction the bowel and promote healing.

Two days post-operatively he develops palpitations and the surgical team request your assistance.

On examination the pulse rate is 220bpm and the blood pressure is 135/90mmHg. Oxygen saturations are 96% on 2L nasal oxygen.

The chest is clear to auscultation.

A 12-lead ECG reveals a wide-complex tachycardia with a polymorphic waveform.

Blood tests from the morning reveal:

Hb	129 g/l
Platelets	643 * 10 ⁹ /l
WBC	13.8 * 10 ⁹ /l
Na ⁺	129 mmol/l
K ⁺	3.3 mmol/l
Phosphate	0.63 mmol/l
Mg ⁺⁺	0.59 mmol/l
Urea	8.1 mmol/l
Creatinine	97 µmol/l
Bilirubin	15 µmol/l
ALP	143 u/l
ALT	53 u/l

Albumin	31 g/l
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What is the most appropriate initial management?

	Adenosine 6mg IV
	Magnesium sulphate 2g
	Metoprolol 5mg IV
	Synchronised DC shock
	Amiodarone 300mg IV

Dashboard

Overall score: 0%

1 -

Question 122 of 193



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	Metoprolol 5mg IV
	Synchronised DC shock
	Amiodarone 300mg IV

Dashboard

Overall score: **0%**
1 -

Question 123 of 193

□ □

A 48-year-old man is brought in by ambulance to the Emergency Department after experiencing sudden onset crushing central chest pain radiating down his arm. His ECG showed an inferior STEMI and he undergoes successful PCI with 2 stents inserted into his right coronary artery. He is transferred to CCU and started on secondary prevention medication.

24 hours after his presentation he becomes bradycardic at 34bpm and his blood pressure falls to 80/47 mmHg. He denies chest pain but feels dizzy and light headed. His cardiac monitor shows 3rd-degree heart block. He is given atropine but his heart rate does not raise and his blood pressure remains low.

What is the most appropriate next step in his management?

	Isoprenaline infusion
	Temporary pacing wire
	Permanent pacemaker
	Repeat angiography
	Adrenaline

Dashboard

Overall score: 0%

1 -

Question 123 of 193



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What is the most appropriate next step in his management?

	Isoprenaline infusion
	Temporary pacing wire
	Permanent pacemaker
	Repeat angiography
	Adrenaline

Dashboard

Overall score: 0%

1 -

Question 124 of 193

□ □

You are working in the general medical clinic where a 42 year old woman comes for review following a recent, short admission to hospital where she was treated for a paracetamol overdose. She has a past history of depression but denies any other previous problems.

During the review, she is found to have a manual blood pressure reading of 165/85 mmHg. Clinical examination of cardiovascular and respiratory systems are normal, as is urine dip and fundoscopy. Given this information what should be your next course of management in relation to her blood pressure.

	Start ramipril
	Offer ambulatory blood pressure monitoring
	Arrange to check blood pressure again following a two week interval
	Start amlodipine
	Screen for causes of secondary hypertension

Dashboard

Overall score: 0%

1 -

Question 124 of 193

□ □

You are working in the general medical clinic where a 42 year old woman comes for review following a recent, short admission to hospital where she was treated for a paracetamol overdose. She has a past history of depression but denies any other previous problems.

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	Screen for causes of secondary hypertension

Dashboard

Overall score: **0%**

1 -

Question 124 of 193

□ □

You are working in the general medical clinic where a 42 year old woman comes for review following a recent, short admission to hospital where she was treated for a paracetamol overdose. She has a past history of depression but denies any other previous problems.

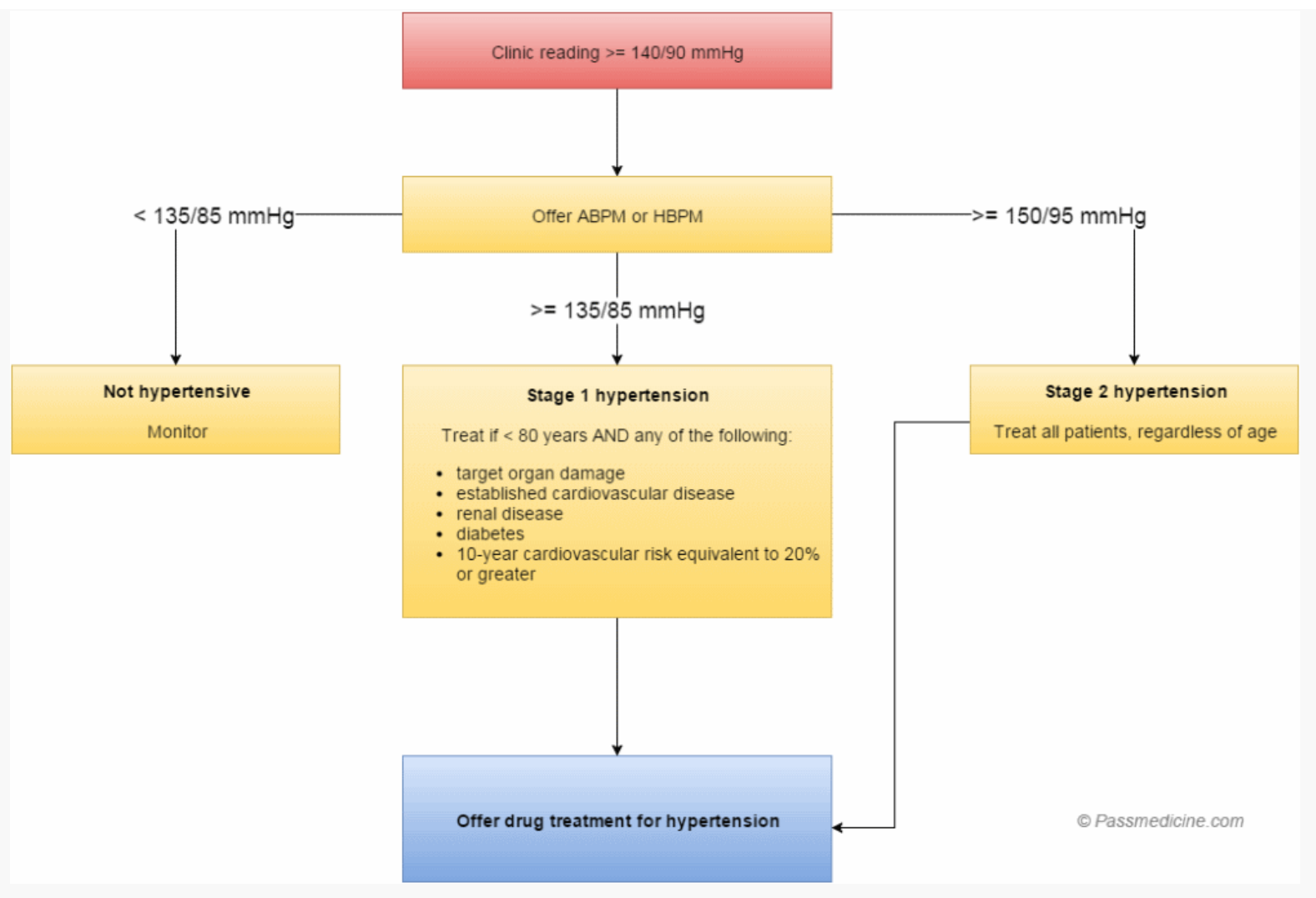
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	Arrange to check blood pressure again following a two week interval
	Start amlodipine
	Screen for causes of secondary hypertension

Dashboard

Overall score: 0%

1 -



□ Question 125 of 193

□ □

Whilst covering medical receiving over night, you are referred a 52 year old man presenting to the Emergency Department with palpitations. He describes 'fluttering in the chest' for the last 48 hours. His past medical history is remarkable only for type 1 diabetes, adequately controlled with insulin. His admission ECG shows atrial fibrillation with a ventricular rate of 130-140 beats per minute. Examination reveals; blood pressure 88/60 mmHg, with capillary refill 3 seconds. His chest is clear to auscultation. He scores 15/15 on the Glasgow coma score. The patient feels light headed but is otherwise uncomplaining. What is the next, best course of management:

	Monitor and observe the patient on the Coronary Care Unit
	Load with 300mg, intravenous amiodarone
	Attempt vagal manoeuvres
	Give 5mg intravenous metoprolol as a slow bolus
	Arrange DC cardioversion

Dashboard

Overall score: 0%

1 -

□ Question 125 of 193

□ □

Whilst covering medical receiving over night, you are referred a 52 year old man presenting to the Emergency Department with palpitations. He describes 'fluttering in the chest' for the last 48 hours. His past medical history is remarkable only for type 1 diabetes, adequately controlled with insulin. His admission ECG shows atrial fibrillation with a ventricular rate of 130-140 beats per minute. Examination reveals; blood pressure 88/60 mmHg, with capillary refill 3 seconds. His chest is clear to auscultation. He scores 15/15 on the Glasgow coma score. The patient feels light headed but is otherwise uncomplaining. What is the next, best course of management:

	Monitor and observe the patient on the Coronary Care Unit
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	Attempt vagal manoeuvres
	Give 5mg intravenous metoprolol as a slow bolus
	Arrange DC cardioversion

Dashboard

Overall score: **0%****1** -

Question 126 of 193

□ □

A 67-year-old woman is reviewed in cardiology clinic following a GP referral. A recent transthoracic echocardiogram demonstrated severe aortic stenosis with an aortic valve at 0.7cm² and a mean pressure gradient of 62mmHg and a left ventricular ejection fraction of 43%. Pulmonary arterial pressure is normal. She has a chest X-ray two months ago which was normal. She denies any symptoms of shortness of breath, chest pain or lightheadedness.

She is normally fit and well with a past medical history of hypothyroidism, two caesarian sections, osteoarthritis and migraines. She is a non-smoker. What is the most appropriate management plan?

	Review in six months
	Cardiac MRI
	Exercise test
	Aortic valve replacement
	Transcatheter aortic valve implantation (TAVI)

Dashboard

Overall score: 0%

1 -

Question 126 of 193

□ □

A 67-year-old woman is reviewed in cardiology clinic following a GP referral. A recent transthoracic echocardiogram demonstrated severe aortic stenosis with an aortic valve at 0.7cm² and a mean pressure gradient of 62mmHg and a left ventricular ejection fraction of 43%. Pulmonary arterial pressure is normal. She has a chest X-ray two months ago which was normal. She denies any symptoms of shortness of breath, chest pain or lightheadedness.

She is normally fit and well with a past medical history of hypothyroidism, two caesarian sections, osteoarthritis and migraines. She is a non-smoker. What is the most appropriate management plan?

	Review in six months
	Cardiac MRI
	Exercise test
	Aortic valve replacement
	Transcatheter aortic valve implantation (TAVI)

Dashboard

Overall score: **0%**

1 -

Question 127 of 193

□ □

A 35-year-old woman presents to the emergency department with chest pain. She is currently pain free, but has had two similar episodes recently lasting approximately 2-3 minutes. She describes the pain as squeezing and central and feels that the pain is brought on by exertion and relieved within a few minutes by resting. Her father died of a heart attack at 72, she has never smoked and has no significant medical history.

On examination, she is slim, her blood pressure is 125/75 mmHg and heart rate is 85 beats per minute, no murmurs are heard and chest sounds are normal. A 12-lead ECG shows normal sinus rhythm.

serum cholesterol	3.2 mmol/L (<5.2)
serum LDL cholesterol	2.0 mmol/L (<3.36)
serum HDL cholesterol	2.65 mmol/L (>1.55)
fasting serum triglycerides	1.0 mmol/L (0.45-1.69)
haemoglobin	125 g/L (115-165)

What is the next most appropriate investigation?

	Angiogram
	Computed tomography calcium scoring
	Exercise tolerance test
	Myocardial perfusion scintigraphy with single photon emission computed tomography
	Stress echocardiogram

Overall score: **0%**

1 -

Question 127 of 193

□ □

A 35-year-old woman presents to the emergency department with chest pain. She is currently pain free, but has had two similar episodes recently lasting approximately 2-3 minutes. She describes the pain as squeezing and central and feels that the pain is brought on by exertion and relieved within a few minutes by resting. Her father died of a heart attack at 72, she has never smoked and has no significant medical history.

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What is the next most appropriate investigation?

	Angiogram
	Computed tomography calcium scoring
	Exercise tolerance test
	Myocardial perfusion scintigraphy with single photon emission computed tomography
	Stress echocardiogram

Overall score: **0%**

1 -

Question 128 of 193

A 34 year old Afro-Caribbean female presents to the heart failure clinic and would like your advice. Two years ago, she presented with shortness of breath and reduced exercise tolerance three months after her second pregnancy. CXR demonstrated bilateral alveolar shadowing. The symptoms were improved following diuresis and she remains on an ACEi, beta blocker and regular furosemide. She continued to be followed up with echocardiograms, her last demonstrating LV EF of 30%. She would like to try for a third pregnancy. What would you recommend regarding pregnancy?

<input type="checkbox"/>	Pregnancy is advised as normal
<input type="checkbox"/>	Pregnancy is not advised
<input type="checkbox"/>	Pregnancy is advised with increased ACEi
<input type="checkbox"/>	Pregnancy is advised with monthly echocardiograms
<input type="checkbox"/>	Pregnancy is advised with increased beta blockade

Dashboard

Overall score: 0%

1 -

Question 128 of 193

A 34 year old Afro-Caribbean female presents to the heart failure clinic and would like your advice. Two years ago, she presented with shortness of breath and reduced exercise tolerance three months after her second pregnancy. CXR demonstrated bilateral alveolar shadowing. The symptoms were improved following diuresis and she remains on an ACEi, beta blocker and regular furosemide. She continued to be followed up with echocardiograms, her last demonstrating LV EF of 30%. She would like to try for a third pregnancy. What would you recommend regarding pregnancy?

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<input type="radio"/>	Pregnancy is advised with increased beta blockade

Dashboard

Overall score: **0%**

1 -

□ Question 129 of 193

□ □

A 38 year old female presenting with 3 months of increasing abdominal and lower limb swelling. She has a past medical history of myasthenia gravis, associated with a thymic mass. Five years ago, she underwent a thymectomy and after positive margins were noted, she was commenced on a course of radiotherapy. She has no other past medical history. On examination, her heart sounds are quiet with no added sounds. Her chest is clear on auscultation. Her JVP is located at 6 cm above the angle of Louis. Abdominal examination reveals a pulsatile liver and smooth hepatomegaly. A CXR demonstrates only minimal pleural and pericardial calcification. What is the definitive treatment?

	Intravenous furosemide
	Intravenous methylprednisolone
	Intravenous immunoglobulin
	Pericardial drain insertion
	Pericardectomy

Dashboard

Overall score: 0%

1 -

Question 129 of 193

□ □

A 38 year old female presenting with 3 months of increasing abdominal and lower limb swelling. She has a past medical history of myasthenia gravis, associated with a thymic mass. Five years ago, she underwent a thymectomy and after positive margins were noted, she was commenced on a course of radiotherapy. She has no other past medical history. On examination, her heart sounds are quiet with no added sounds. Her chest is clear on auscultation. Her JVP is located at 6 cm above the angle of Louis. Abdominal examination reveals a pulsatile liver and smooth hepatomegaly. A CXR demonstrates only minimal pleural and pericardial calcification. What is the definitive treatment?

	Intravenous furosemide
	Intravenous methylprednisolone
	Intravenous immunoglobulin
	Pericardial drain insertion
	Pericardectomy

Dashboard

Overall score: **0%**

1 -

Question 130 of 193

□ □

A 35-year-old Sri-Lankan lady is referred to the medical registrar by the obstetric registrar with hypoxia. She had just undergone an emergency caesarean section and had had to be transfused with four units of blood and intravenous fluids because of post-partum haemorrhage. She was otherwise fit and well and was taking no regular medications. It was her first pregnancy and she had had no problems other than a prolonged labour. There was no history of orthopnoea, chest pain or exertional dyspnoea. On examination she has widespread fine crepitations throughout both lung fields and a soft systolic and a soft diastolic murmur. Her respiratory rate is 24 breaths per minute and her oxygen saturations are 94% breathing 40% oxygen. Her heart rate is 105 beats per minutes and blood pressure 149/78 mmHg. A chest x-ray reveals features of acute pulmonary oedema with no cardiomegaly.

What is the most likely underlying diagnosis?

	Transfusion related acute lung injury (TRALI)
	Mitral stenosis
	Pulmonary embolus
	Peri-partum cardiomyopathy
	Basal atelectasis

Dashboard

Overall score: 0%

1 -

Question 130 of 193

□ □

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1 -

□ Question 130 of 193

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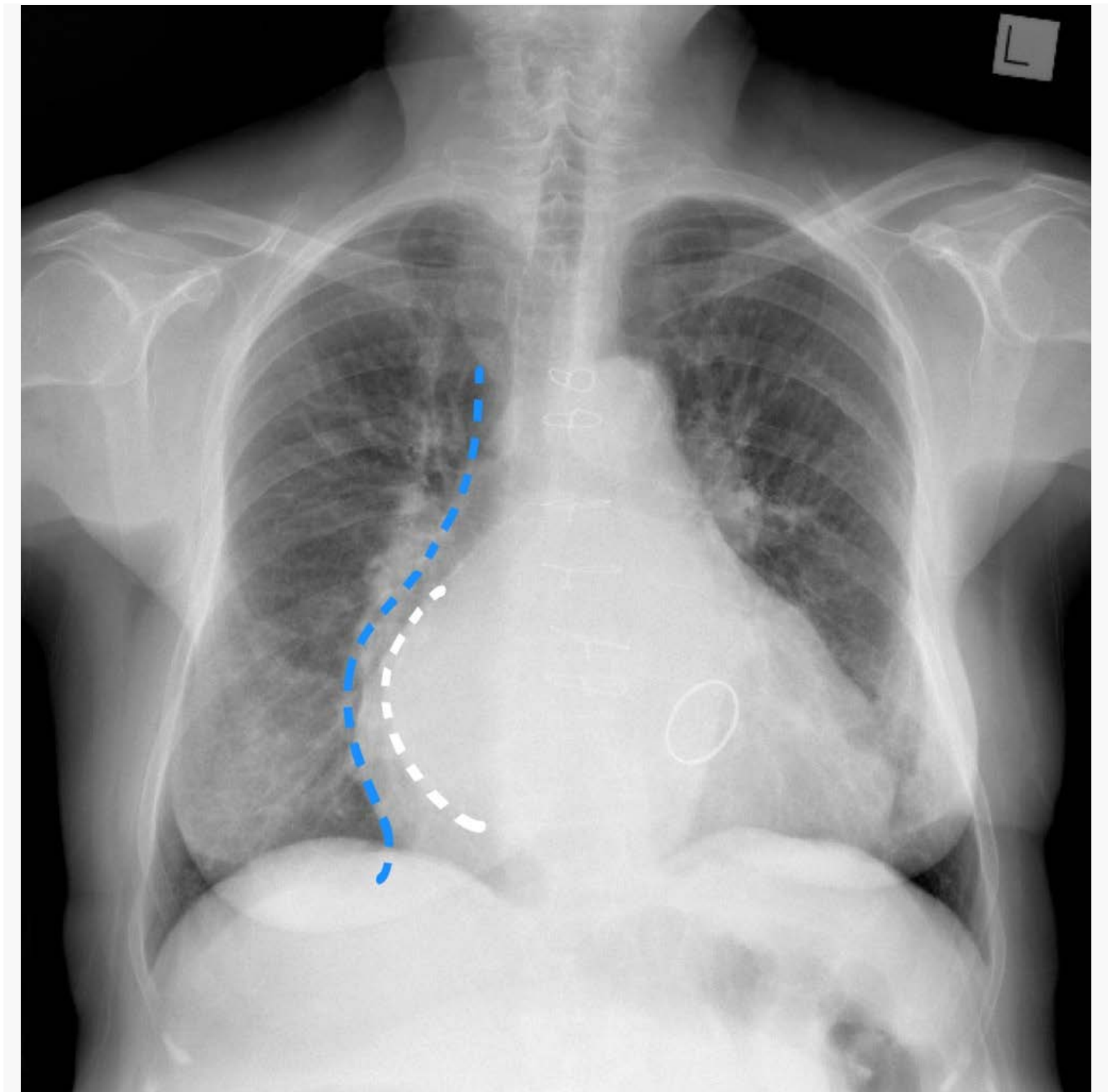
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	Mitral stenosis
	Pulmonary embolus
	Peri-partum cardiomyopathy
	Basal atelectasis

Dashboard

Overall score: **0%**

1 -



Question 131 of 193

□ □

A 74-year-old woman is reviewed prior to discharge from a care of the elderly ward. She was admitted with urosepsis and found to have atrial fibrillations as well. She was treated over five days with first IV antibiotics and then oral antibiotics.

Her temperature has settled her symptoms have resolved. Her heart rate is now regular and within normal range. This occurred over the first 24hrs of admission as her sepsis was treated. She has a background of osteoarthritis, osteoporosis, hip fracture, glaucoma, hypothyroidism, hypertension and congestive cardiac failure. She takes alendronic acid, cholecalciferol, levothyroxine, amlodipine and ramipril. How should the episode of AF be managed in terms of anticoagulation?

	No further management needed
	Monitor with Holter monitor over 48hrs
	Clinical review in six weeks
	Offer anticoagulation with aspirin
	Offer anticoagulation with warfarin or NOAC

Dashboard

Overall score: 0%

1 -

Question 131 of 193

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Dashboard

Overall score: **0%**

1 -

Question 132 of 193

□ □

A 78-year-old woman presents to the emergency department with complaints of palpitations. Her episodes of palpitations occur roughly once a month and are not associated with any chest pain or shortness of breath. She has a past medical history of ischaemic heart disease, type 2 diabetes, depression, hypertension and migraines. She takes aspirin, metformin, simvastatin and uses paracetamol when she needs them for headaches. She lives alone with a twice daily package of care.

An ECG demonstrates an irregularly irregular rhythm with no p-waves. She is offered bisoprolol to control her symptoms but does not want to take it regularly. She asks if she could take the bisoprolol only when she has palpitations as they occur so rarely. What would make a 'pill-in-the-pocket' strategy inappropriate for her?

	Hypertension
	History of ischaemic heart disease
	Age
	Living alone
	Palpitations too frequent

Dashboard

Overall score: 0%

1 -

Question 132 of 193

□ □

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	Hypertension
	History of ischaemic heart disease
	Age
	Living alone
	Palpitations too frequent

Dashboard

Overall score: **0%**

1 -

□ Question 133 of 193



A 78-year-old woman attends the cardiology outpatient department after being referred by her general practitioner with angina. The patient reports consistent chest tightness after walking around 200 metres on flat ground but denies any episodes of pain at rest. Her symptoms have been stable at the current level for at least six months. Her GP has previously attempted treatment with both metoprolol and amlodipine but both were stopped after the patient reported dizziness and was found to be hypotensive.

The patient was formerly a heavy smoker but had stopped 15 years previously after suffering a non-ST elevation myocardial infarction (managed with medical therapy only). The patient had been diagnosed with type 2 diabetes mellitus 10 years previously and was known to have chronic kidney disease.

The patients current medications included aspirin 75 mg daily, simvastatin 20 mg daily, ramipril 1.25 mg daily and gliclazide 60 mg twice daily. She sometimes used a nitrate spray to relieve episodes of angina but found that it normally made her very dizzy.

Clinical examination was unremarkable except for a blood pressure of 98 / 65 mmHg.

Please see below for results of recent investigations.

Transthoracic echocardiogram: normal valvular function; moderately impaired left ventricular; ejection fraction 35 %.

Electrocardiogram: sinus rhythm at 85 beats per minute; normal axis; normal QRS complex, normal ST segments and T waves.

Urea	15.6 mmol / L
Creatinine	234 micromol / L
Sodium	135 mmol / L
Potassium	4.9 mmol / L

Cardiac stress MRI: evidence of mild myocardial ischaemia in left anterior descending territory, estimated < 10 % myocardium ischaemic.

What is the correct next line therapy for the patients angina?

	Percutaneous coronary intervention
	Nicorandil
	Ranolazine
	Ivabradine
	Long-acting isosorbide mononitrate

Dashboard

Overall score: **0%**

1 -

□ Question 133 of 193



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	Long-acting isosorbide mononitrate

Dashboard

Overall score: **0%**
1 -

Question 134 of 193

□ □

A 56-year-old gentleman was admitted to the Emergency Department with a three-hour history of severe central chest pain. The pain came on suddenly whilst he was walking. The pain has remained severe in intensity since onset. He also felt short of breath at rest with associated clamminess. There was no history of trauma. His past medical history comprised of hypertension, hypercholesterolaemia and gout. He was prescribed amlodipine 5mg OD, ramipril 7.5mg OD, atorvastatin 20mg OD, allopurinol 100mg and orlistat 120mg TDS. He smoked 20 cigarettes per day and consumed 30 units of alcohol per week.

On examination, he appeared pale and clammy. His blood pressure was 196/78 mmHg in his right arm and 152/65 mmHg in his left arm. His heart rate was 92bpm. His oxygen saturations were 96% on air. Examination of his cardiovascular system revealed the presence of a prominent early diastolic murmur in the aortic area. Examination of his respiratory system revealed tachypnoea but no added sounds on auscultation. Examination of his gastrointestinal and neurological systems was unremarkable.

He was admitted to the resuscitation bay and commenced on 15 litres of oxygen per minute. He was administered IV diamorphine 2.5mg OD. Investigations conducted revealed the following results:

ECG: normal sinus rhythm 96 bpm, ST elevation in leads II, III and aVF

Chest x-ray: normal appearances of heart and lung

What is the best immediate management step?

	Commence thrombolysis
	Transfer for immediate percutaneous coronary intervention
	Commence aspirin 300mg OD and clopidogrel 300mg OD
	Conduct myocardial perfusion scan
	Commence IV labetalol infusion

Overall score: **0%**

1 -

Question 134 of 193

□ □

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	Conduct myocardial perfusion scan
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Overall score: **0%**

1 -

Question 134 of 193

A 56-year-old gentleman was admitted to the Emergency department with chest pain. The pain came on suddenly whilst he was walking. He felt short of breath at rest with associated clammy skin. His medical history comprised of hypertension, hypercholesterolaemia and he was on atorvastatin 20mg OD, allopurinol 100mg OD and orlistat 120mg units of alcohol per week.

On examination, he appeared pale and clammy. His blood pressure was 160/90 mmHg in his left arm. His heart rate was 92bpm. His physical examination of his cardiovascular system revealed the presence of a murmur. His examination of his respiratory system revealed tachypnoea but no additional findings. His neurological systems was unremarkable.

He was admitted to the resuscitation bay and commenced on aspirin 300mg OD, diamorphine 2.5mg OD. Investigations conducted revealed the following:

ECG: normal sinus rhythm 96 bpm, ST elevation in leads II, III and aVF

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What is the best immediate management step?



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Commence aspirin 300mg OD and clopidogrel 300mg OD

Conduct myocardial perfusion scan

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Overall score: **0%**

1 -

Question 134 of 193

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Dashboard

Overall score: **0%**

1 -



□ Question 135 of 193



A 73 year old man was admitted as an emergency suffering from severe, central and crushing chest pain. ECG revealed evidence of anterior ST elevation MI and primary percutaneous coronary intervention was performed with deployment of two drug-eluting stents to the left anterior descending artery. The patient had no previous coronary artery disease or significant family history. He is an ex-smoker and drinks approximately 10 units of alcohol per week.

Post-procedure the patient was well and mobilised on the ward without further chest pain or shortness of breath. Clinical examination was unremarkable.

The patient was commenced on aspirin, clopidogrel, ramipril, bisoprolol and atorvastatin therapy. Further investigations performed following intervention are summarised as below.

Haemoglobin	13.9 d / dL
White cell count	$8.6 \times 10^9/l$
Platelets	$199 \times 10^9/l$
Urea	7.2 mmol / L
Creatinine	110 micromol / L
Sodium	137 mmol / L
Potassium	4.3 mmol / L
Total cholesterol	5.4 mmol / L
LDL cholesterol	3.1 mmol / L
HDL cholesterol	1.2 mmol / L
Triglycerides	2.5 mmol / L

Transthoracic echocardiogram: no valvular abnormality; mild anterior dyskinesia with overall normal left ventricular systolic function; ejection fraction 55-60 %

Primary PCI report: total occlusion of mid-LAD, two DES deployed with good angiographic result; 50 % mid-vessel

occlusion of right coronary artery; circumflex unobstructed.

Prior to discharge the patient asks to speak to you about any other possible strategies to reduce his risk of suffering a further heart attack.

Which of the following interventions is recommended for this patient by NICE guidance on secondary prevention of myocardial infarction?

	Percutaneous coronary intervention to right coronary artery
	Mediterranean-style diet
	Abstinence from alcohol
	Omega-3 fatty acid supplements
	Aldosterone antagonist (for example, eplerenone)

Dashboard

Overall score: 0%

1 -

□ Question 135 of 193



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Dashboard

Overall score: **0%**

1 -

Question 136 of 193



A 64-year-old male presents sudden onset back pain while painting a wall at home, radiating to his left anterior chest and jaw, associated with nausea and vomiting. It appears to be constant for the past 3 hours since onset and is his first ever episode. His past medical history includes hypertension, hypercholesterolaemia and one previous transient ischaemic attack.

His ECG demonstrates left ventricular hypertrophy by voltage criteria and T-wave inversion in I, aVF and V5 and V6. On examination, his heart sounds are both present with a soft systolic murmur. The chest is clear and abdomen is soft and non-tender without a pulsatile mass. Both radial pulses are intact with no delay. There is a mild radio-femoral delay. His blood pressure is stable at 134/80 mmHg, heart rate 124/min and sinus rhythm. His bloods are as follows:

Hb	123 g/l
MCV	82 fl
Platelets	204 * 10 ⁹ /l
WBC	9.2 * 10 ⁹ /l
Troponin T	240 (normal range < 32)

His pain settles transiently with 2.5mg of subcutaneous morphine. What is the most appropriate immediate action?

	Aspirin 300mg and clopidogrel 300mg and treatment dose low molecular weight heparin
	Intravenous fluids
	Blood transfusion
	Coronary angiogram +/- stent as appropriate
	CT aorta

Overall score: **0%**

1 -

Question 136 of 193



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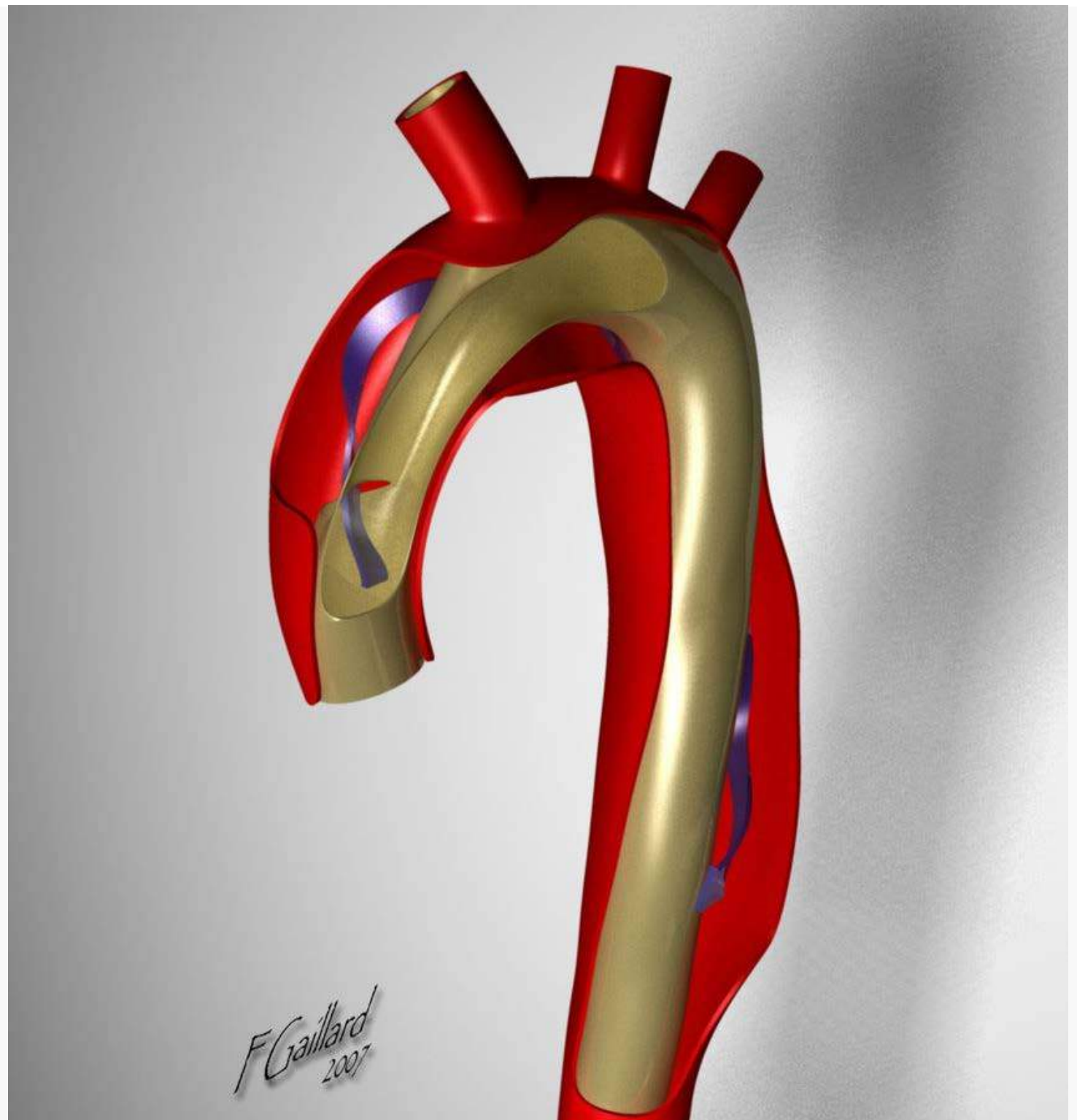
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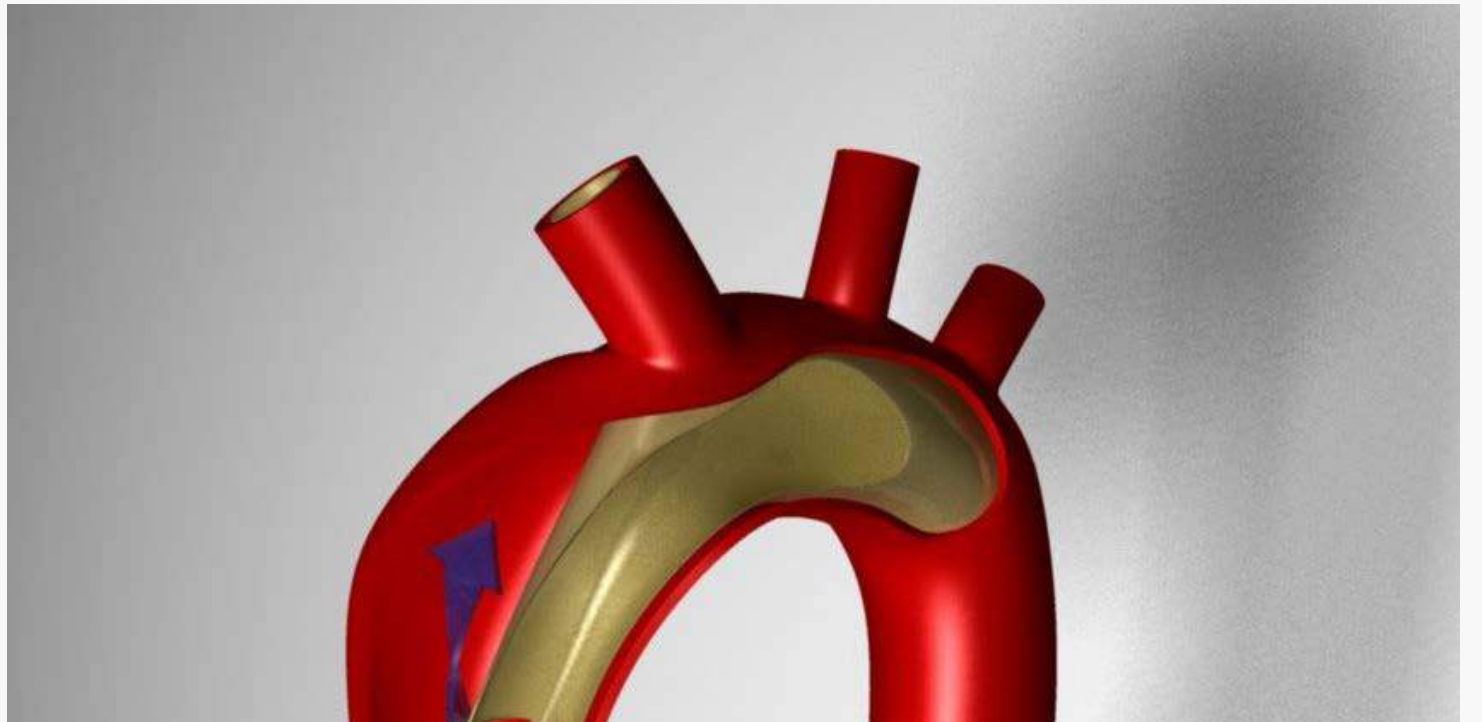
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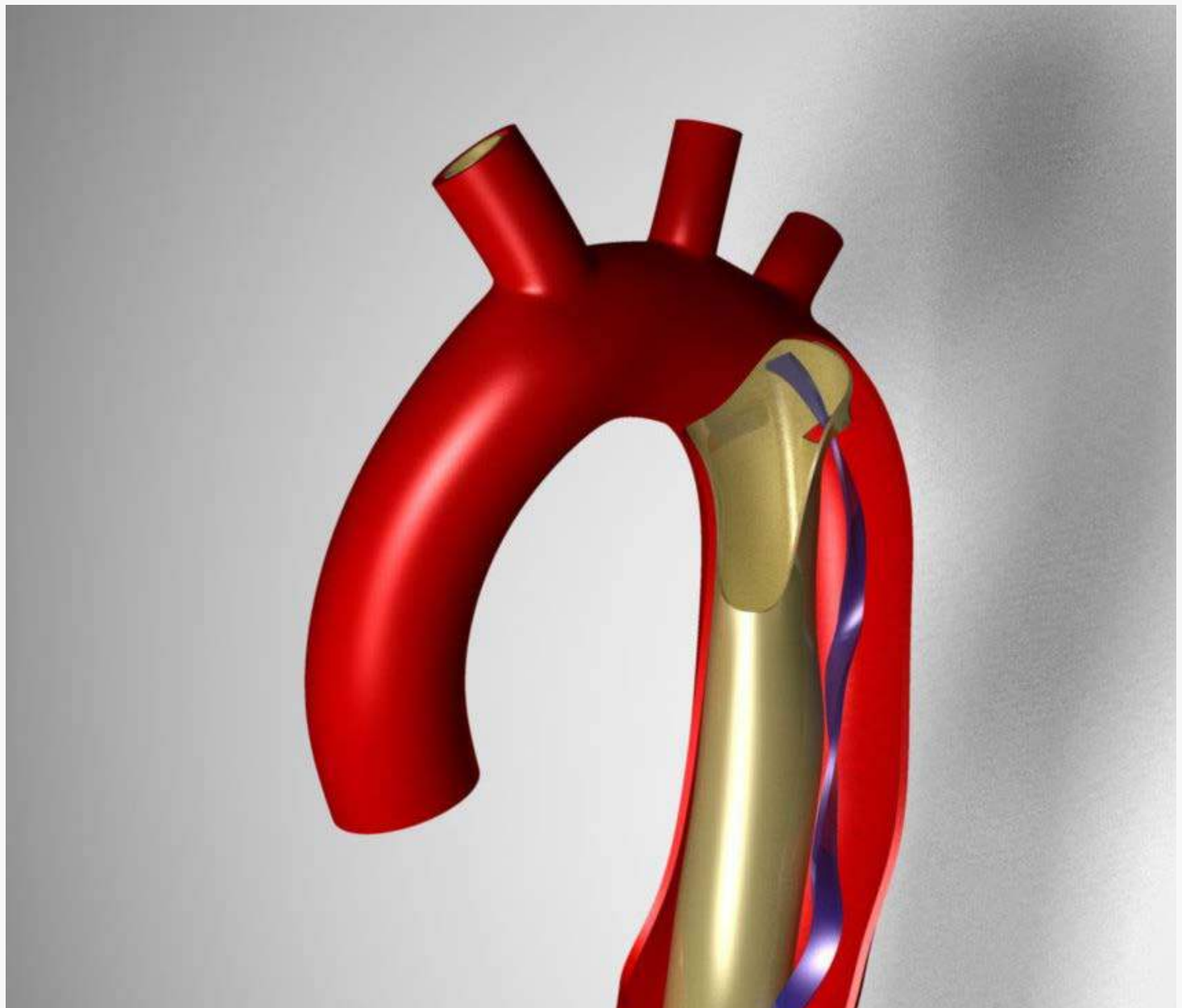
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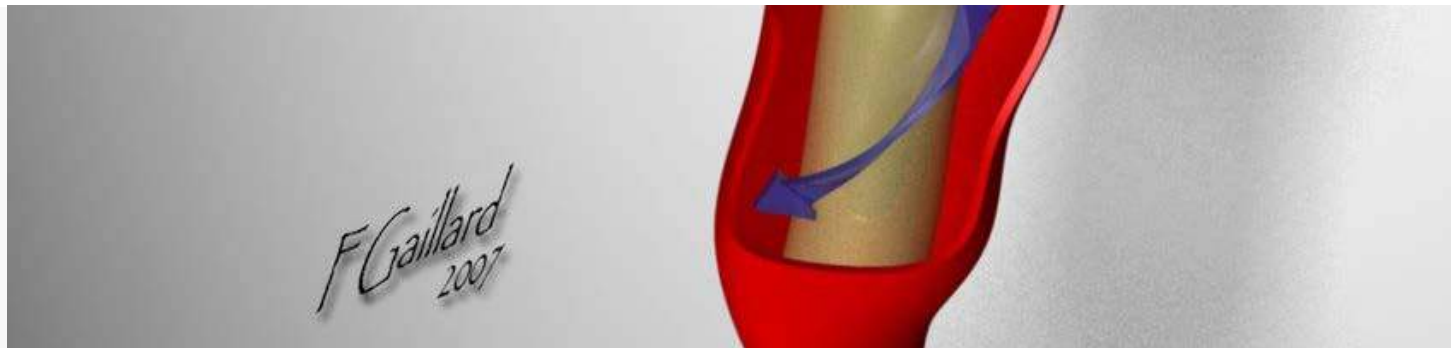
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	Aspirin 300mg and clopidogrel 300mg and treatment dose low molecular weight heparin
	Intravenous fluids
	Blood transfusion
	Coronary angiogram +/- stent as appropriate
	CT aorta

Overall score: **0%**

1 -





Question 137 of 193



A 50-year-old woman is seen by her GP for a routine check-up. She has a past medical history of congestive cardiac failure secondary to hypertension. She takes lisinopril, bisoprolol, simvastatin and aspirin. Her symptoms are largely controlled, but her blood pressure is 140/95mmHg.

On examination, she appears well. She is overweight, but independently mobile. Her heart rate is 80 beats per minute. She has a few scattered crepitations on chest auscultation, but no wheeze. She is afebrile, with pitting oedema to the ankles.

Bloods show:

Hb	14.2 g/dl
Platelets	215 * 10 ⁹ /l
WBC	7.5 * 10 ⁹ /l

Na ⁺	140 mmol/l
K ⁺	4.8 mmol/l
Urea	4 mmol/l
Creatinine	75 µmol/l
Fasting blood glucose	5.3 mmol/L

What is the most appropriate option for this lady?

	No further treatment
	Amlodipine
	Indapamide

	Candesartan
	Increase dose of lisinopril

Dashboard

Overall score: **0%**
1 -

Question 137 of 193



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Platelets	215 * 10 ⁹ /l
WBC	7.5 * 10 ⁹ /l

Na ⁺	140 mmol/l
K ⁺	4.8 mmol/l
Urea	4 mmol/l
Creatinine	75 µmol/l
Fasting blood glucose	5.3 mmol/L

What is the most appropriate option for this lady?

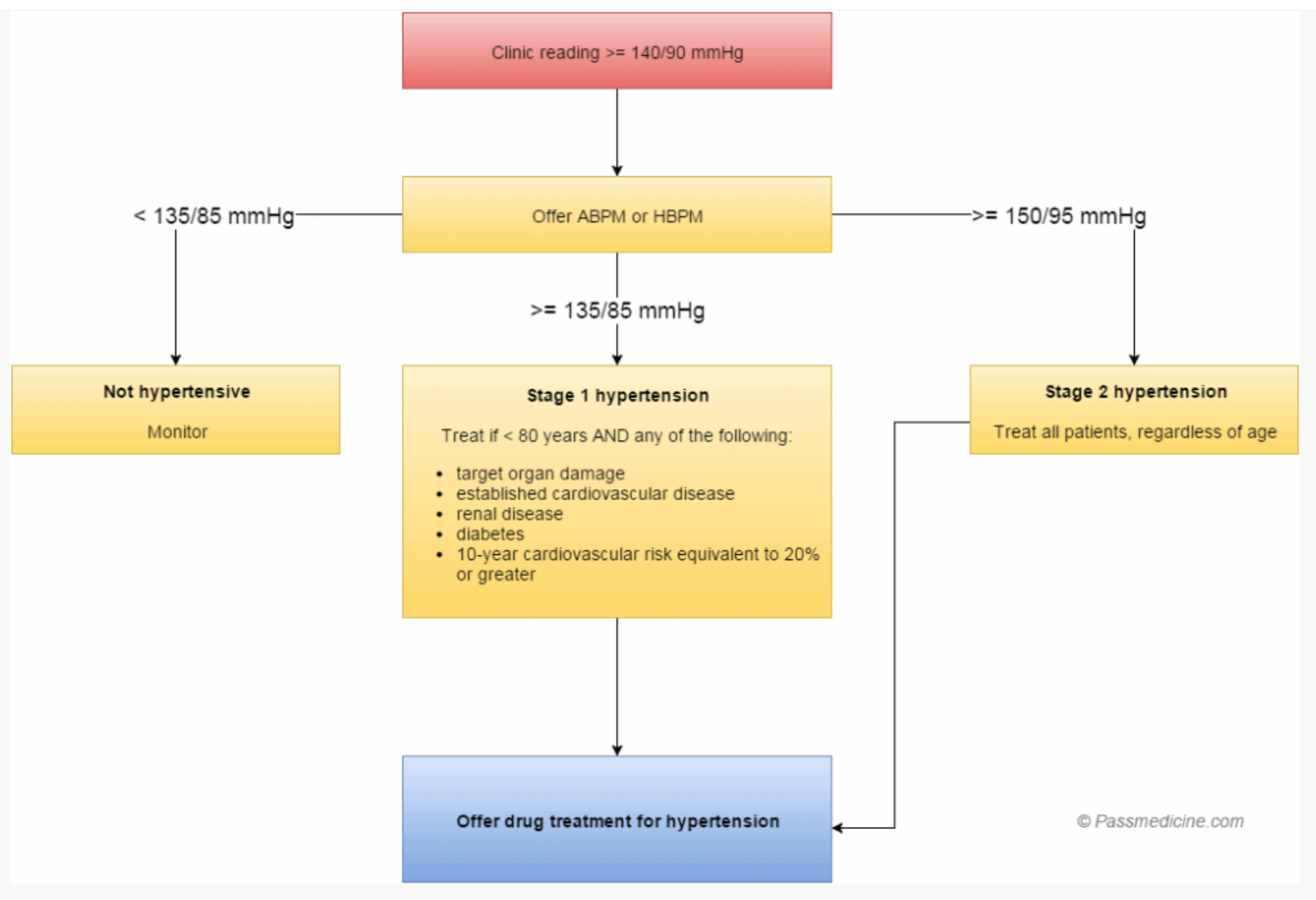
	No further treatment
	Amlodipine
	Indapamide
	Candesartan

Increase dose of lisinopril

Dashboard

Overall score: **0%**

1 -



□ Question 137 of 193

□ □

A 50-year-old woman is seen by her GP for a routine check-up. She has a past medical history of congestive cardiac failure secondary to hypertension. She takes lisinopril, bisoprolol, simvastatin and aspirin. Her symptoms are largely controlled, but her blood pressure is 140/95mmHg.

On examination, she appears well. She is overweight, but independently mobile. Her heart rate is 80 beats per minute. She has a few scattered crepitations on chest auscultation, but no wheeze. She is afebrile, with pitting oedema to the ankles.

Bloods show:

Hb	14.2 g/dl
Platelets	$215 \times 10^9/l$
WBC	$7.5 \times 10^9/l$

Na ⁺	140 mmol/l
K ⁺	4.8 mmol/l
Urea	4 mmol/l
Creatinine	75 μ mol/l
Fasting blood glucose	5.3 mmol/L

What is the most appropriate option for this lady?

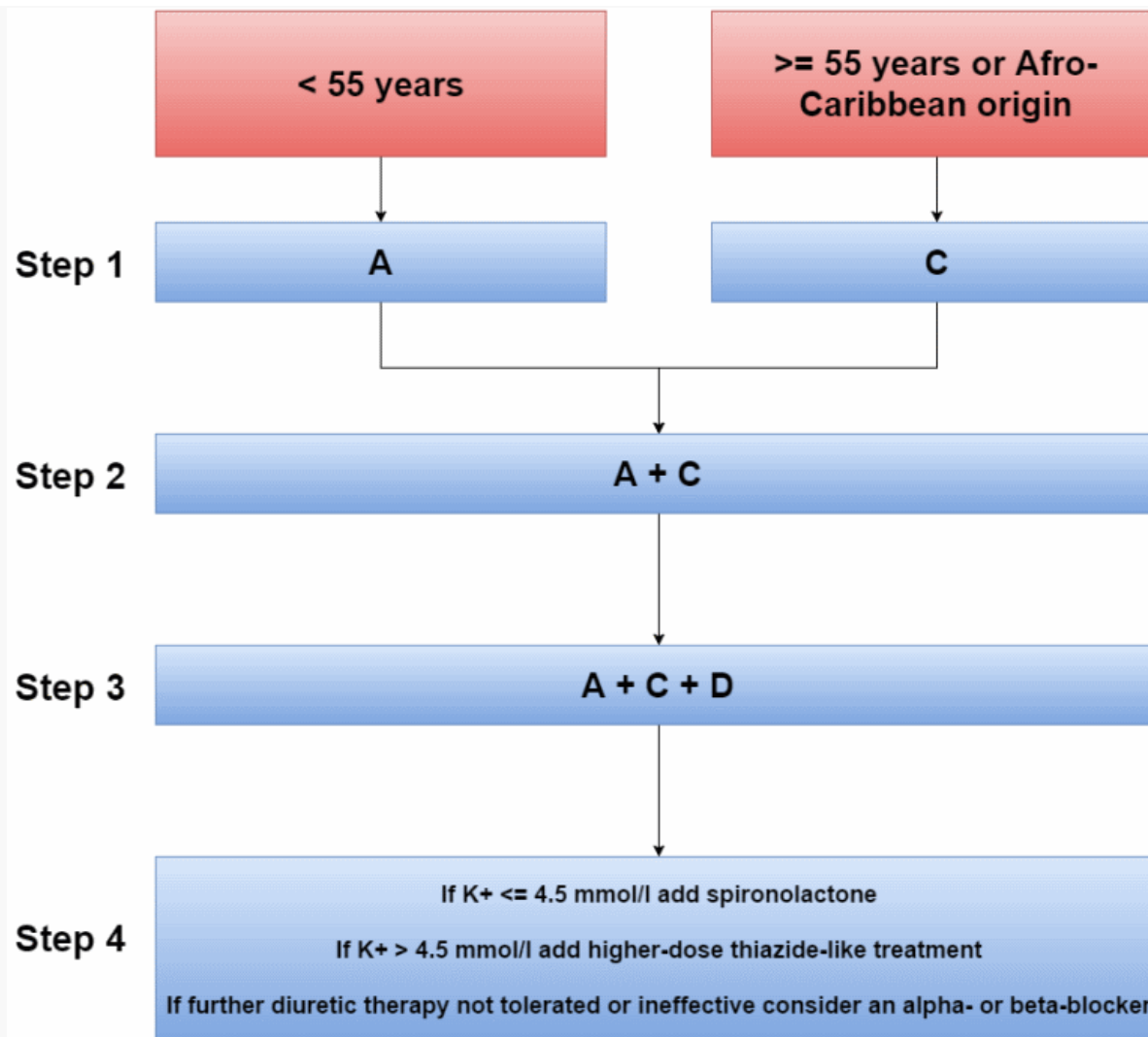
	No further treatment
	Amlodipine
	Indapamide
	Candesartan

Increase dose of lisinopril

Dashboard

Overall score: **0%**

1 -



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Key

A = ACE inhibitor

C = Calcium channel blocker

D = Thiazide Diuretic

Question 138 of 193

□ □

A 69-year-old gentleman is reviewed in cardiology clinic. He has been suffering from angina for five years and despite optimal medical management he finds that his symptoms are worsening. He has a past medical history of type 2 diabetes mellitus, gout and hypertension. He is currently taking felodipine, atenolol, atorvastatin, aspirin, ramipril and metformin. He has recently undergone an angiogram which has delineated triple vessel disease. He is very keen to optimise his survival chances as he is concerned about dying of a heart attack.

What intervention would have the greatest survival advantage?

	Aggressive control of blood pressure, cholesterol and diabetes
	Percutaneous coronary intervention (PCI) with insertion of stents
	Coronary arterial bypass graft (CABG)
	No intervention will give a further survival advantage
	Heart transplant

Dashboard

Overall score: 0%

1 -

Question 138 of 193

□ □

A 69-year-old gentleman is reviewed in cardiology clinic. He has been suffering from angina for five years and despite optimal medical management he finds that his symptoms are worsening. He has a past medical history of type 2 diabetes mellitus, gout and hypertension. He is currently taking felodipine, atenolol, atorvastatin, aspirin, ramipril and metformin. He has recently undergone an angiogram which has delineated triple vessel disease. He is very keen to optimise his survival chances as he is concerned about dying of a heart attack.

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	Percutaneous coronary intervention (PCI) with insertion of stents
	Coronary arterial bypass graft (CABG)
	No intervention will give a further survival advantage
	Heart transplant

Dashboard

Overall score: **0%**

1 -

□ Question 139 of 193



A 45 year old female presents with a two month history of reduced appetite and one and half stone of weight loss in the past two months. She reports no pain but has noted an abdomen to be increasingly distended, which she notes to be uncomfortable and impairing her breathing. She has no other past medical history, is a non-smoker and does not drink alcohol to excess. Her mother and aunt both passed away in their 50s and 60s respectively from ovarian cancer. When you examine her, you note abdominal distension and tenderness on deep palpation. Her flanks appear dull to percussion with percussion splash on auscultation. Examinations of her respiratory, cardiovascular and neurological systems are unremarkable. An admission chest radiograph demonstrates clear lung fields. Her initial blood results are as follows:

Hb	14.1 g/dl
Platelets	304 * 10 ⁹ /l
WBC	9.0 * 10 ⁹ /l
Na ⁺	133 mmol/l
K ⁺	4.2 mmol/l
Urea	7.8 mmol/l
Creatinine	125 µmol/l
CRP	80 mg/l
Tumour markers	Not yet reported

A CT of her chest, abdomen and pelvis with contrast reveals moderate amounts of ascites associated with contrast enhancing lesions on various sites of her peritoneum. No lymphadenopathy or masses are detected.

Her tumour markers return as below:

Ca 125	280
(normal <35units/ml)	
Ca 19-9	12 (normal range <37 units/ml)

Ca 15-3	12 (normal <30 units/ml)
CEA	3.4 (normal range < 5.5ng/ml)
Alpha 1 fetoprotein	88 (normal range < 400ng/ml)

What is the appropriate next management?

	Start platinum-based chemotherapy for epithelial ovarian carcinoma
	Start platinum-based empirical chemotherapy for breast carcinoma
	Ascitic drain with human albumin solution, send for serum-ascites albumin gradient, MCS, cytology
	Ascitic drain without human albumin solution, send for serum-ascites albumin gradient, MCS, cytology
	Repeat tumour markers in 6 weeks

Dashboard

Overall score: **0%**

1 -

□ Question 139 of 193



A 45 year old female presents with a two month history of reduced appetite and one and half stone of weight loss in the past two months. She reports no pain but has noted an abdomen to be increasingly distended, which she notes to be uncomfortable and impairing her breathing. She has no other past medical history, is a non-smoker and does not drink alcohol to excess. Her mother and aunt both passed away in their 50s and 60s respectively from ovarian cancer. When you examine her, you note abdominal distension and tenderness on deep palpation. Her flanks appear dull to percussion with percussion splash on auscultation. Examinations of her respiratory, cardiovascular and neurological systems are unremarkable. An admission chest radiograph demonstrates clear lung fields. Her initial blood results are as follows:

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	Ascitic drain with human albumin solution, send for serum-ascites albumin gradient, MCS, cytology
	Ascitic drain without human albumin solution, send for serum-ascites albumin gradient, MCS, cytology
	Repeat tumour markers in 6 weeks

Dashboard

Overall score: **0%**

1 -

Question 140 of 193

A 30-year-old man presents with a fever. He complains that he has had a fever, headache and lethargy for three weeks. On examination, his temperature is 38.5C. You notice a healed human bite mark on his right forearm, he tells you he was bitten in a pub brawl about a couple months ago. Diastolic and systolic murmurs are heard on auscultation. A trans-oesophageal echo demonstrates an oscillating mass on a bicuspid aortic valve, with aortic regurgitation. Three blood cultures are taken before administration of empirical antibiotics, two grow small colonies of tiny pleomorphic gram-negative bacilli.

What is the likely causative organism?

	<i>Eikenella corrodens</i>
	<i>Escherichia coli</i>
	<i>Phoenicoparrus andinus</i>
	<i>Staphylococcus aureus</i>
	<i>Streptococcus viridans</i>

Dashboard

Overall score: 0%

1 -

Question 140 of 193

□ □

A 30-year-old man presents with a fever. He complains that he has had a fever, headache and lethargy for three weeks. On examination, his temperature is 38.5°C. You notice a healed human bite mark on his right forearm, he tells you he was bitten in a pub brawl about a couple months ago. Diastolic and systolic murmurs are heard on auscultation. A trans-oesophageal echo demonstrates an oscillating mass on a bicuspid aortic valve, with aortic regurgitation. Three blood cultures are taken before administration of empirical antibiotics, two grow small colonies of tiny pleomorphic gram-negative bacilli.

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	<i>Escherichia coli</i>
	<i>Phoenicoparrus andinus</i>
	<i>Staphylococcus aureus</i>
	<i>Streptococcus viridans</i>

Dashboard

Overall score: **0%**

1 -

Question 141 of 193

□ □

A patient with a severe rheumatic heart disease is about to attend a gastroscopy with oesophageal dilatation. He has no current active gastrointestinal infection. What endocarditis prophylaxis is recommended?

	Ciprofloxacin PO 30 min pre-procedure
	None
	IV ampicillin at time of surgery
	IV cefazolin at time of surgery
	Erythromycin PO 30 min pre-procedure

Dashboard

Overall score: **0%**

1 -

□ Question 141 of 193

□ □

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	IV cefazolin at time of surgery
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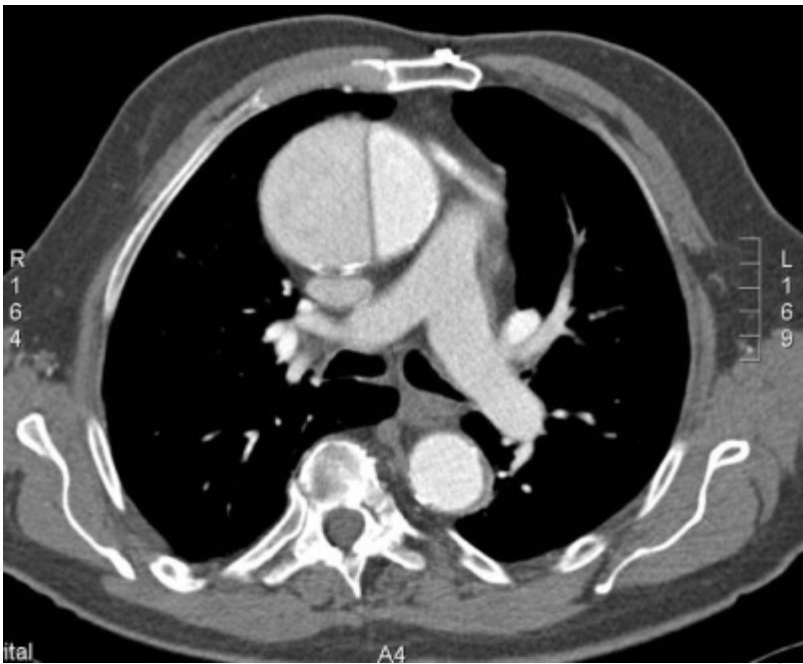
Dashboard

Overall score: **0%**

1 -

Question 142 of 193

A 65-year-old man is admitted with central chest pain which began around three hours ago. His past medical history includes ischaemic heart disease (acute coronary syndrome two years ago), hypertension and gastro-oesophageal reflux disease. The pain is described as severe and does not radiate. His pulse is 110/min, blood pressure 150/94 mmHg, respiratory rate 18/min, temperature 37.1°C. A CT chest (with contrast) is ordered:



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What is the most likely diagnosis?

	Aortic dissection (Stanford type B)
	Pulmonary embolism
	Cardiac tamponade

	Boerhaave syndrome
	Aortic dissection (Stanford type A)

Dashboard

Overall score: **0%**

1 -

Question 142 of 193

A 65-year-old man is admitted with central chest pain which began around three hours ago. His past medical history includes ischaemic heart disease (acute coronary syndrome two years ago), hypertension and gastro-oesophageal reflux disease. The pain is described as severe and does not radiate. His pulse is 110/min, blood pressure 150/94 mmHg, respiratory rate 18/min, temperature 37.1°C. A CT chest (with contrast) is ordered:



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	Boerhaave syndrome
	Aortic dissection (Stanford type A)

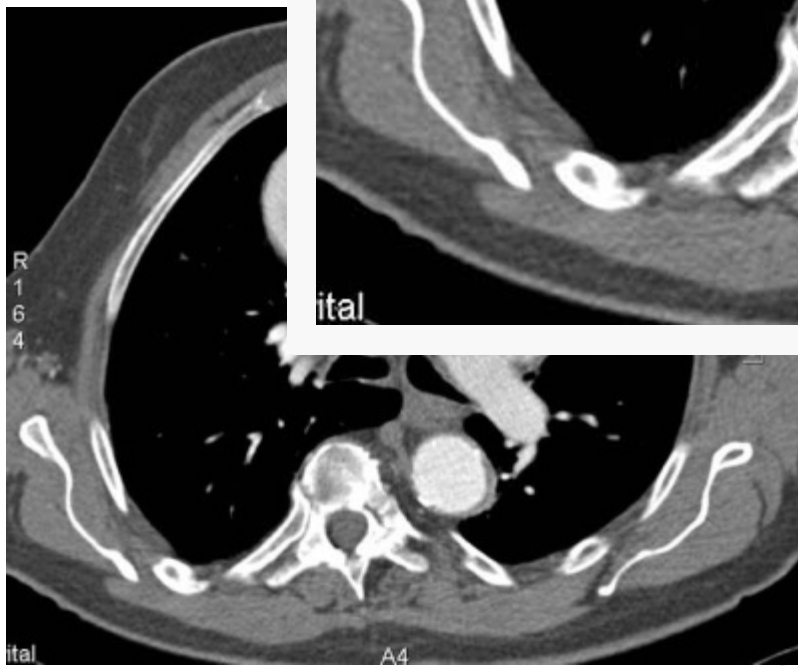
Dashboard

Overall score: **0%**

1 -

Question 142 of 193

A 65-year-old man is admitted with central chest pain. His medical history includes ischaemic heart disease (acute coronary syndrome) and hypertension. The pain is described as severe and does not radiate. His respiratory rate is 18/min, temperature 37.1°C. A CT scan of the chest is shown.



© Image used on license from Radiopaedia

What is the most likely diagnosis?

	Aortic dissection (Stanford type B)
	Pulmonary embolism
	Cardiac tamponade

	Boerhaave syndrome
	Aortic dissection (Stanford type A)

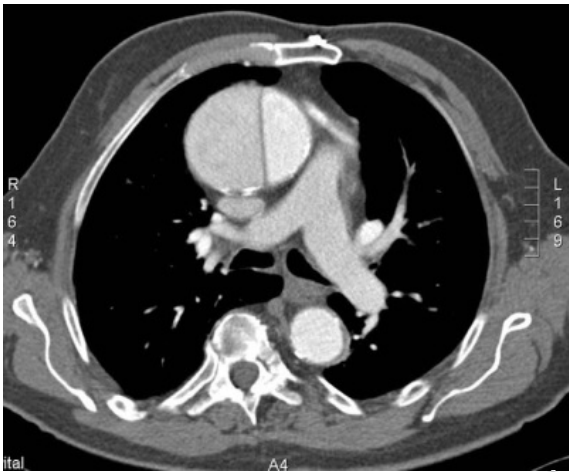
Dashboard

Overall score: **0%**

1 -

Question 142 of 193

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What is the most likely diagnosis?

	Aortic dissection (Stanford type B)
	Pulmonary embolism
	Cardiac tamponade
	Boerhaave syndrome
	Aortic dissection (Stanford type A)

Dashboard

Overall score: 0%

1 -



Question 143 of 193



A 45-year-old woman develops severe central chest pain. An ECG in the ambulance shows ST segment elevation in leads: I, aVL, V2-6. Shortly after she arrives in hospital the pain resolves and a second ECG is entirely normal. She has had three similar episodes of chest pain in the past. All episodes of chest pain have come on at rest. Blood pressure is 140/80 mmHg, heart rate is 90 beats per minute and hearts sounds are normal. She underwent coronary angiography following a previous episode of chest pain three weeks ago, which showed no significant coronary artery disease. An echocardiogram is normal.

What is the likely diagnosis?

	Acute anterolateral myocardial infarction
	Crescendo angina
	Da Costas syndrome
	Prinzmetal's variant angina
	Takotsubo cardiomyopathy

Dashboard

Overall score: 0%

1 -

Question 143 of 193



A 45-year-old woman develops severe central chest pain. An ECG in the ambulance shows ST segment elevation in leads: I, aVL, V2-6. Shortly after she arrives in hospital the pain resolves and a second ECG is entirely normal. She has had three similar episodes of chest pain in the past. All episodes of chest pain have come on at rest. Blood pressure is 140/80 mmHg, heart rate is 90 beats per minute and hearts sounds are normal. She underwent coronary angiography following a previous episode of chest pain three weeks ago, which showed no significant coronary artery disease. An echocardiogram is normal.

What is the likely diagnosis?

	Acute anterolateral myocardial infarction
	Crescendo angina
	Da Costas syndrome
	Prinzmetal's variant angina
	Takotsubo cardiomyopathy

Dashboard

Overall score: 0%

1 -

□ Question 144 of 193



A 52-year-old man of Afro-Caribbean descent is reviewed after having ambulatory blood pressure monitoring (ABPM). This had been ordered after a works medical recorded a blood pressure of 156/86 mmHg. He smokes 20 cigarettes/day and has a family history of ischaemic heart disease. The results show the following:

Average daytime blood pressure: 142/88 mmHg

QRISK 10 year cardiovascular risk: 23%

Urine dipstick: NAD

ECG: sinus rhythm, rate 78/min

Na ⁺	141 mmol/l
K ⁺	4.6 mmol/l
Urea	4.5 mmol/l
Creatinine	82 µmol/l
Total cholesterol	5.4 mmol/l
HDL cholesterol	0.9 mmol/l
Fasting glucose	5.3 mmol/l

What is the most appropriate course of action?

<input type="checkbox"/>	Start treatment with a calcium channel blocker
<input type="checkbox"/>	Diagnose stage 1 hypertension and advise about lifestyle changes
<input type="checkbox"/>	Start treatment with an ACE inhibitor
<input type="checkbox"/>	Start treatment with a thiazide-like diuretic
<input type="checkbox"/>	Repeat the ABPM

Dashboard

Overall score: **0%**

1 -

Question 144 of 193



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ECG: sinus rhythm, rate 78/min

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Creatinine	82 µmol/l
Total cholesterol	5.4 mmol/l
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Fasting glucose	5.3 mmol/l

What is the most appropriate course of action?

<input checked="" type="checkbox"/>	Start treatment with a calcium channel blocker
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<input type="checkbox"/>	Start treatment with an ACE inhibitor
<input type="checkbox"/>	Start treatment with a thiazide-like diuretic
<input type="checkbox"/>	Repeat the ABPM

Dashboard

Overall score: **0%**

1 -

Question 144 of 193

□ □

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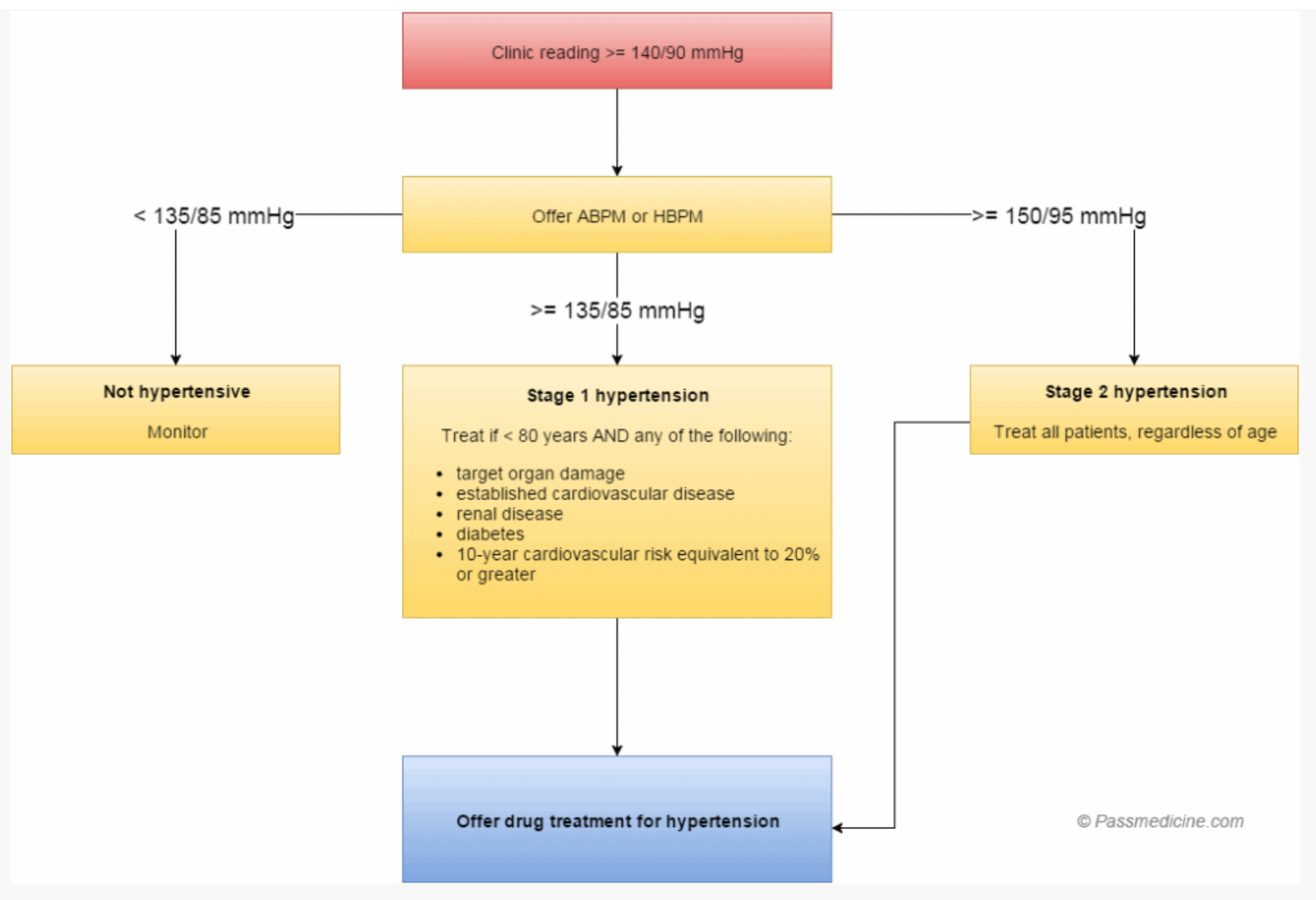
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	Start treatment with a calcium channel blocker
	Diagnose stage 1 hypertension and advise about lifestyle changes
	Start treatment with an ACE inhibitor
	Start treatment with a thiazide-like diuretic
	Repeat the ABPM

Overall score: **0%**
1 -



Question 145 of 193

□ □

A 50-year-old patient with no prior medical history presents to the Emergency Department with crushing central chest pain. On examination you find:

- Respiratory rate - 22/min
- Oxygen saturations 95% on room air
- Chest clear
- Pulse 118bpm
- Blood pressure 92/61mmHg
- JVP elevated 4cm above sternal angle

An ECG done in the department shows 3mm ST segment elevation in leads II, III and aVF. The patient undergoes a primary PCI to his right coronary artery with a good angiographic result. An echocardiogram is performed the following day. What would you expect to see?

	Regional wall motion abnormality in the inferior wall of the LV
	Regional wall motion abnormality in the inferior wall of the LV with a dilated and impaired RV
	Normal biventricular function
	Constrictive pericarditis
	Regional wall motion abnormality in the inferior wall of the LV with mitral regurgitation

Dashboard

Overall score: 0%

1 -

Question 145 of 193

□ □

A 50-year-old patient with no prior medical history presents to the Emergency Department with crushing central chest pain. On examination you find:

- Respiratory rate - 22/min
- Oxygen saturations 95% on room air
- Chest clear
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	Regional wall motion abnormality in the inferior wall of the LV with mitral regurgitation

Dashboard

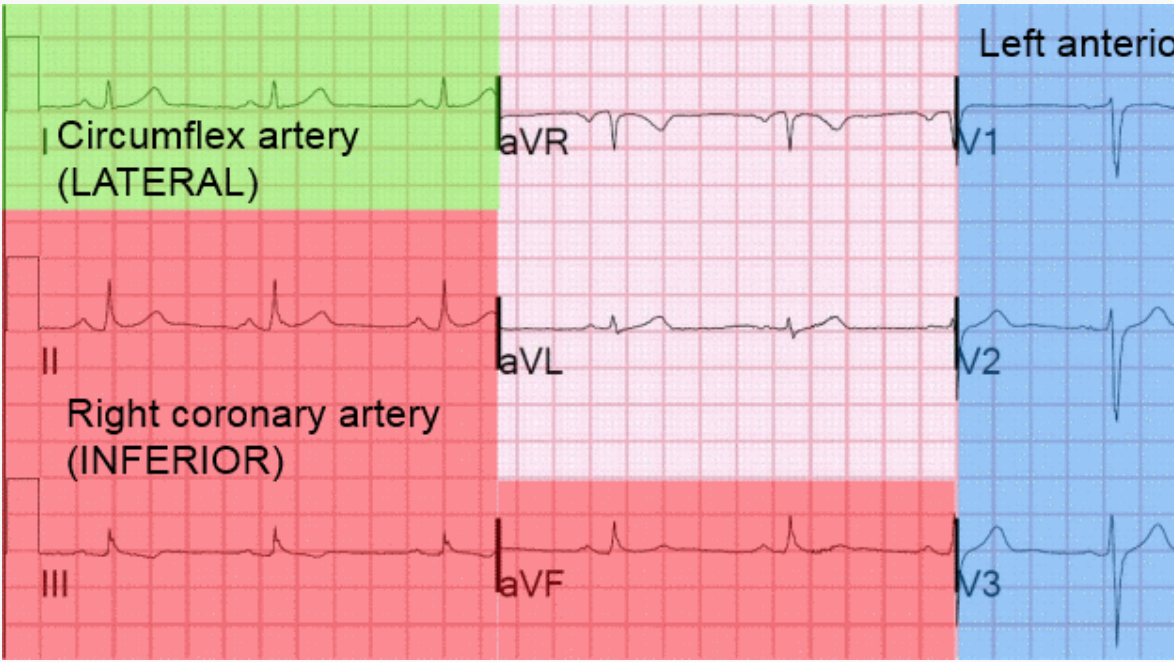
Overall score: **0%**

1 -

Question 145 of 193

A 50-year-old patient with chest pain. On examination you find

- Respiratory rate - 22/min
- Oxygen saturations 92%
- Chest clear
- Pulse 118bpm
- Blood pressure 92/61
- JVP elevated 4cm above the sternal angle



An ECG done in the department shows 3mm ST segment elevation in leads II, III and aVF. The patient undergoes a primary PCI to his right coronary artery with a good angiographic result. An echocardiogram is performed the following day. What would you expect to see?

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	Regional wall motion abnormality in the inferior wall of the LV with mitral regurgitation

Dashboard

Overall score: 0%

1 -

□ Question 146 of 193



An 84-year-old man comes for review. Four weeks ago an opportunistic blood pressure reading was taken and recorded as 150/92 mmHg. You therefore arranged ambulatory blood pressure monitoring (ABPM) along with a standard hypertension work-up. You did not calculate his 10-year cardiovascular risk on account of his age. The following results were obtained:

Na ⁺	141 mmol/l
K ⁺	4.2 mmol/l
Urea	6.5 mmol/l
Creatinine	101 µmol/l
Total cholesterol	4.9 mmol/l
HDL cholesterol	1.2 mmol/l
Fasting glucose	5.5 mmol/l

Urine dipstick was normal. The ECG showed sinus rhythm, 72 bpm and first degree heart block.

The daytime average blood pressure reading was 145/80 mmHg. What is the most appropriate course of action?

	Diagnose stage 1 hypertension and advise about lifestyle changes
	Start treatment with an ACE inhibitor
	Start treatment with a calcium channel blocker
	Start treatment with a thiazide-like diuretic
	Repeat the ABPM

Overall score: **0%**

1 -

□ Question 146 of 193



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	Diagnose stage 1 hypertension and advise about lifestyle changes
	Start treatment with an ACE inhibitor
	Start treatment with a calcium channel blocker
	Start treatment with a thiazide-like diuretic
	Repeat the ABPM

Overall score: **0%**

1 -

Question 146 of 193

□ □

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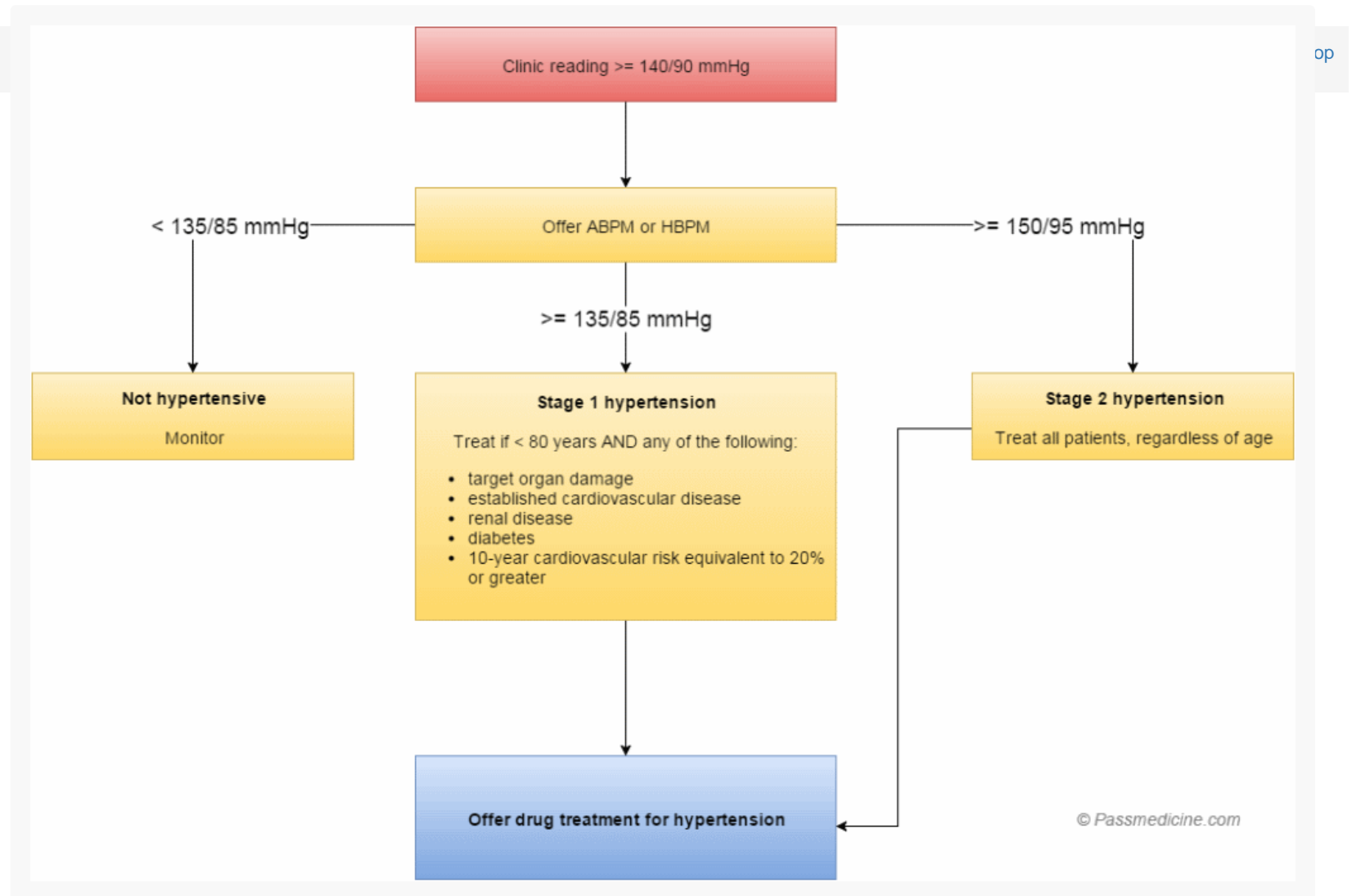
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The daytime average blood pressure reading was 145/80 mmHg. What is the most appropriate course of action?

	Diagnose stage 1 hypertension and advise about lifestyle changes
	Start treatment with an ACE inhibitor
	Start treatment with a calcium channel blocker
	Start treatment with a thiazide-like diuretic
	Repeat the ABPM

Overall score: 0%

1 -



Question 147 of 193

□ □

A 79 year old male presents with two months history of reducing exercise tolerance and increasing lower limb oedema. He is now short of breath on minimal exertion, greatly restricts his ability to perform activities of daily living. He is on maximum doses of ramipril, bisoprolol, 80mg furosemide and spironolactone. His last ejection fraction 3 months ago was 30%. His ECG demonstrates no acute ischaemic changes, with a left bundle branch block (old confirmed with previous ECG from 4 months ago), sinus rhythm and QRS complex width of 170ms. What is the next optimal treatment?

	Increasing furosemide to 80mg BD
	Addition of eplerenone
	Addition of ivabradine
	Cardiac resynchronisation therapy (CRT)
	Cardiac resynchronisation therapy (CRT) and implantable cardiac defibrillator (ICD) insertion

Dashboard

Overall score: 0%

1 -

Question 147 of 193

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	Cardiac resynchronisation therapy (CRT)
	Cardiac resynchronisation therapy (CRT) and implantable cardiac defibrillator (ICD) insertion

Dashboard

Overall score: **0%**

1 -

Question 148 of 193

A 22-year-old man is admitted to the Emergency Department with palpitations. Earlier in the evening he snorted a large amount of cocaine and has been feeling unwell since. His heart rate is 148/min, blood pressure 135/78 mmHg and oxygen saturations 99% on room air. The ECG shows sinus tachycardia with no ischaemic changes. He is given intravenous diazepam but this fails to settle his symptoms. What is the most appropriate next step?

<input type="checkbox"/>	Sotalol
<input type="checkbox"/>	Bisoprolol
<input type="checkbox"/>	Verapamil
<input type="checkbox"/>	Digoxin
<input type="checkbox"/>	Ivabradine

Dashboard

Overall score: 0%

1 -

Question 148 of 193

□ □

A 22-year-old man is admitted to the Emergency Department with palpitations. Earlier in the evening he snorted a large amount of cocaine and has been feeling unwell since. His heart rate is 148/min, blood pressure 135/78 mmHg and oxygen saturations 99% on room air. The ECG shows sinus tachycardia with no ischaemic changes. He is given intravenous diazepam but this fails to settle his symptoms. What is the most appropriate next step?

	Sotalol
	Bisoprolol
	Verapamil
	Digoxin
	Ivabradine

Dashboard

Overall score: **0%**

1 -

Question 149 of 193

A 76-year-old man is brought to the Emergency Department by the paramedics after experiencing an episode of chest pain. This came whilst he was walking his dog and lasted around 20 minutes. He is now pain free. The paramedics report that his blood pressure is 126/88mmHg, pulse 75/min and oxygen saturations 98% on room air. On examination you note a systolic murmur. An ECG is requested:



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What does the ECG show?

	Hypertrophic obstructive cardiomyopathy
	Anterior myocardial infarction
	Left bundle branch block
	Brugada syndrome
	Arrhythmogenic right ventricular cardiomyopathy



Question 149 of 193

A 76-year-old man is brought to the Emergency Department by the paramedics after experiencing an episode of chest pain. This came whilst he was walking his dog and lasted around 20 minutes. He is now pain free. The paramedics report that his blood pressure is 126/88mmHg, pulse 75/min and oxygen saturations 98% on room air. On examination you note a systolic murmur. An ECG is requested:



© Image used on license from Dr Smith, University of Minnesota



What does the ECG show?

	Hypertrophic obstructive cardiomyopathy
	Anterior myocardial infarction
	Left bundle branch block
	Brugada syndrome
	Arrhythmogenic right ventricular cardiomyopathy

Dashboard

Overall score: 0%

Question 150 of 193



A 60-year-old patient is called to his GP for a health check. He has a past medical history of asthma and a family history of hypertension and bowel cancer. He has a 10 pack-year history of smoking but quit with the help of the practice nurse 2 years ago. He drinks 24 units of alcohol per week, and his body mass index is 25 kg/m². He does not take any regular medication. His blood pressure is 155/95 mmHg. He is sent for ambulatory blood pressure monitoring (ABPM), which shows an average blood pressure of 145/90 mmHg. His 10-year cardiovascular risk is 12%.

Examination, including fundoscopy, is unremarkable.

Bloods show:

Hb	132 g/l
Platelets	330 * 10 ⁹ /l
WBC	7.3 * 10 ⁹ /l

Na ⁺	142 mmol/l
K ⁺	3.9 mmol/l
Urea	5 mmol/l
Creatinine	80 µmol/l
eGFR	91 ml/min
Fasting plasma glucose	5mmol/L
Serum total cholesterol	4mmol/L
HDL cholesterol	1.8mmol/L

Urinary albumin:creatinine ratio	1.1 mg/mmol
Urine dip	negative for haematuria

An ECG shows sinus rhythm.

What is the first step in the management of this man's blood pressure?

	Lisinopril
	Lifestyle advice
	Amlodipine
	Spironolactone
	Atenolol

Dashboard

Overall score: 0%

1 -

Question 150 of 193



A 60-year-old patient is called to his GP for a health check. He has a past medical history of asthma and a family history of hypertension and bowel cancer. He has a 10 pack-year history of smoking but quit with the help of the practice nurse 2 years ago. He drinks 24 units of alcohol per week, and his body mass index is 25 kg/m². He does not take any regular medication. His blood pressure is 155/95 mmHg. He is sent for ambulatory blood pressure monitoring (ABPM), which shows an average blood pressure of 145/90 mmHg. His 10-year cardiovascular risk is 12%.

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What is the first step in the management of this man's blood pressure?

	Lisinopril
	Lifestyle advice
	Amlodipine
	Spironolactone
	Atenolol

Dashboard

Overall score: **0%**
1 -

□ Question 150 of 193

□ □

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Urinary albumin:creatinine ratio	1.1 mg/mmol
Urine dip	negative for haematuria

An ECG shows sinus rhythm.

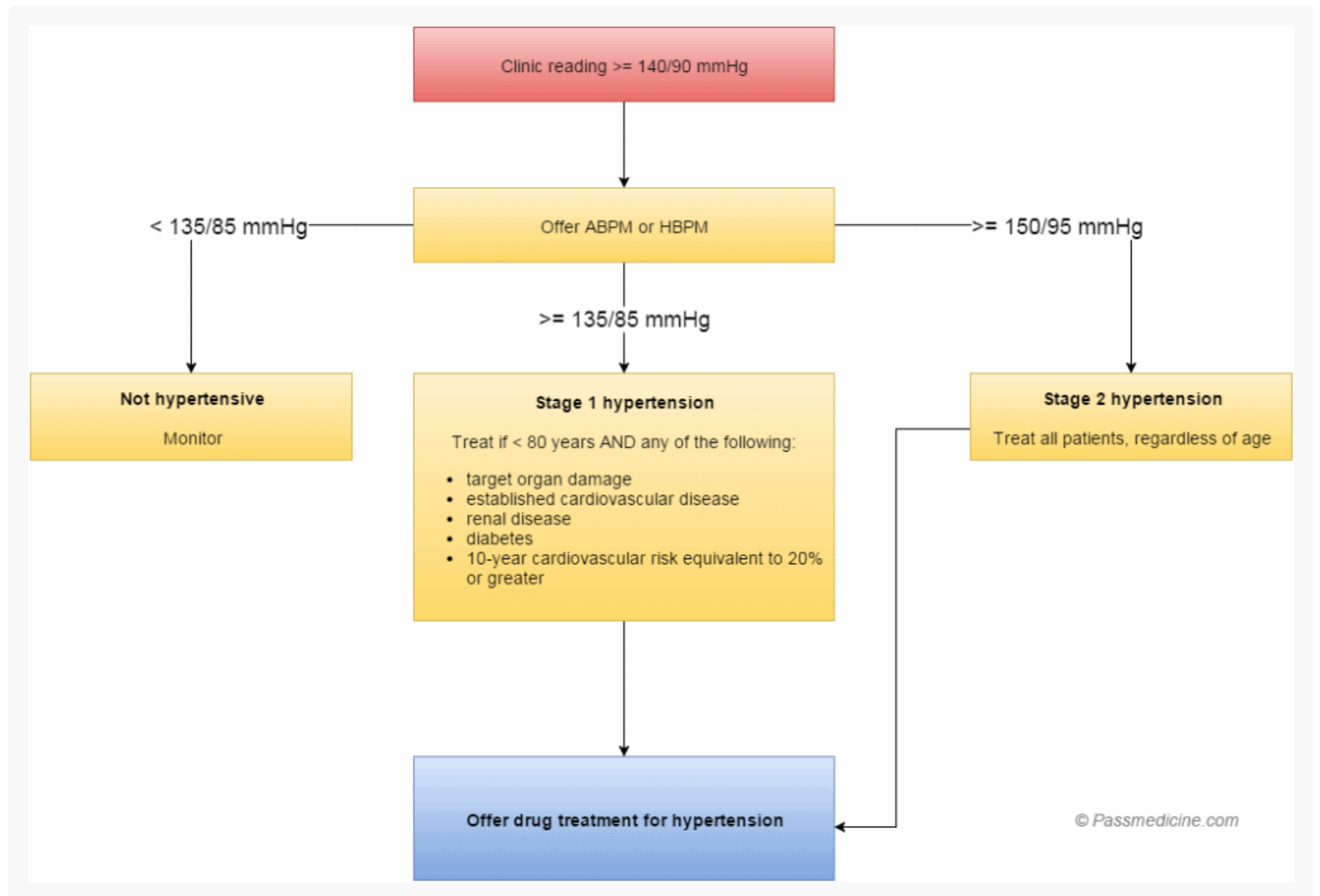
What is the first step in the management of this man's blood pressure?

	Lisinopril
	Lifestyle advice
	Amlodipine
	Spirolactone
	Atenolol

Dashboard

Overall score: **0%**

1 -



□ Question 150 of 193

□ □

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Urinary albumin:creatinine ratio	1.1 mg/mmol
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An ECG shows sinus rhythm.

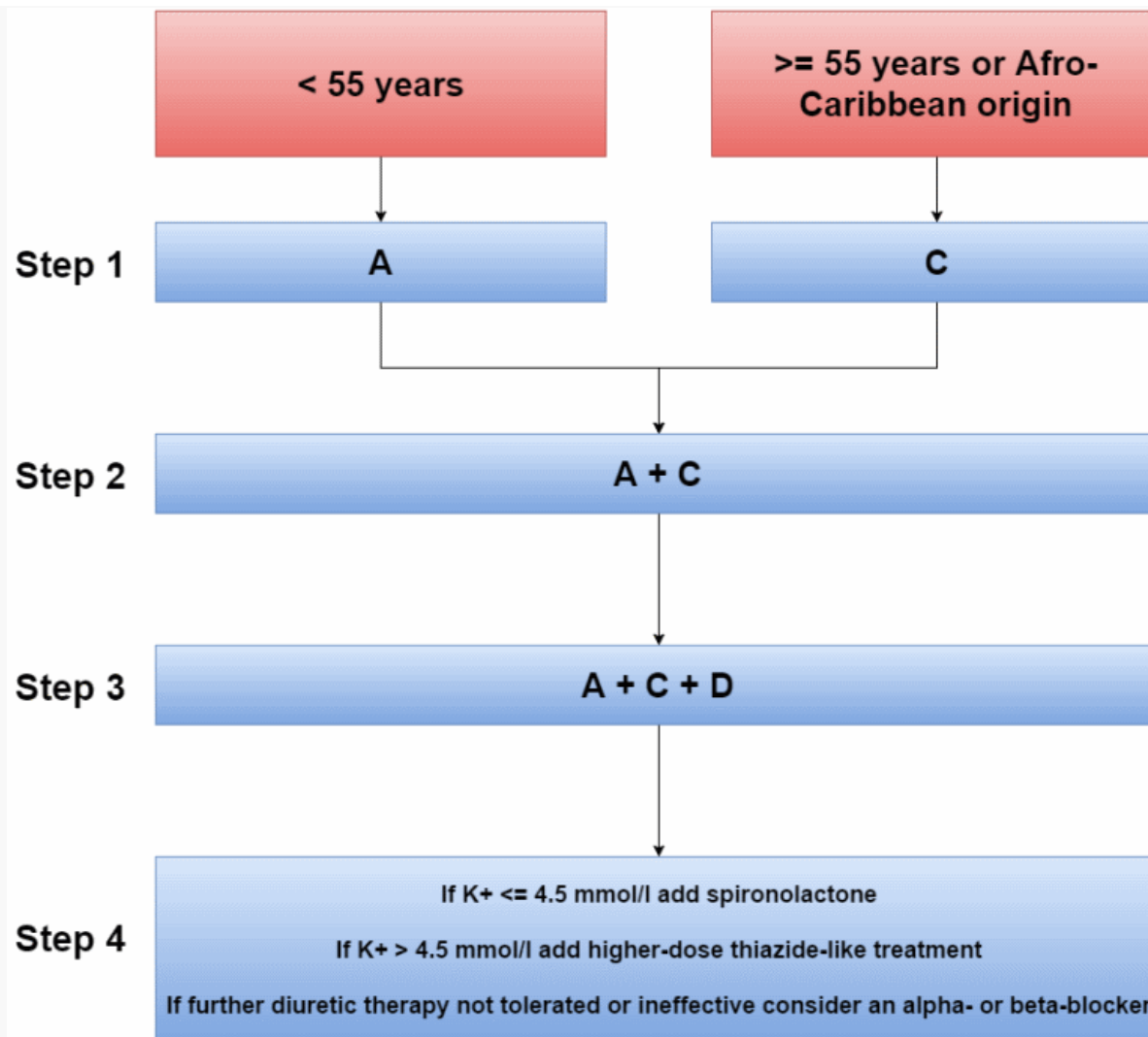
What is the first step in the management of this man's blood pressure?

	Lisinopril
	Lifestyle advice
	Amlodipine
	Spironolactone
	Atenolol

Dashboard

Overall score: 0%

1 -



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Key

A = ACE inhibitor

C = Calcium channel blocker

D = Thiazide Diuretic

Question 151 of 193

□ □

A 66-year-old Caucasian female presents with 3 week history of worsening headache and 2 day history of shortness of breath. She reports disturbed sleeping at night due to an inability to lie down, due to her shortness of breath. She has no known past medical history and drug history. On examination, you note bilateral splinter haemorrhages, 4 on the right and 2 on the left, with calcium deposits distally and black spots in the pulp of the fingers. Perioral skin puckering is also noted. Cardiovascular examination is unremarkable, chest examination reveals bilateral coarse inspiratory crackles. Neurological examination is unremarkable except fundoscopy revealing papilloedema, cotton wool spots and flame haemorrhages. The patient is afebrile, Sats 95% on 2 litres, respiratory rate 24/min, blood pressure 195/115 mmHg, HR 90/min and regular. Chest x-ray demonstrates bilateral pleural effusion with bilateral alveolar shadowing. What is the most important immediate management?

	Oral amlodipine
	Oral captopril
	Intravenous labetalol
	Oral high-dose prednisolone
	Renal dialysis

Dashboard

Overall score: 0%

1 -

Question 151 of 193

□ □

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	Oral amlodipine
	Oral captopril
	Intravenous labetalol
	Oral high-dose prednisolone
	Renal dialysis

Dashboard

Overall score: **0%**

1 -

Question 151 of 193

A 66-year-old Caucasian female presents with 3 weeks of shortness of breath. She reports disturbed sleeping at night due to breathlessness. She has no known past medical history and drug history. On examination, there are bilateral crackles and 2+ lower limb edema on the left, with calcium deposits distally and no clubbing. Cardiovascular examination is unremarkable, and neurological examination is unremarkable except for finger nail haemorrhages. The patient is afebrile, SpO₂ 95% on room air, HR 90/min and regular. Chest x-ray demonstrates bilateral interstitial thickening. What is the most important immediate management?



<input type="radio"/>	Oral amlodipine
<input type="radio"/>	Oral captopril
<input type="radio"/>	Intravenous labetalol
<input type="radio"/>	Oral high-dose prednisolone
<input type="radio"/>	Renal dialysis

Dashboard

Overall score: **0%**

1 -

Question 151 of 193

A 66-year-old Caucasian female presents with 3 weeks of breathlessness. She reports disturbed sleeping at night due to breathlessness. She has no known past medical history and drug history. On examination, there are 2+ pitting oedema on the left, with calcium deposits distally and noted. Cardiovascular examination is unremarkable, Neurological examination is unremarkable except for finger haemorrhages. The patient is afebrile, Sats 95% on room air, HR 90/min and regular. Chest x-ray demonstrates bilateral interstitial markings. What is the most important immediate management?

<input type="radio"/>	Oral amlodipine
<input checked="" type="radio"/>	Oral captopril
<input type="radio"/>	Intravenous labetalol
<input type="radio"/>	Oral high-dose prednisolone
<input type="radio"/>	Renal dialysis



Dashboard

Overall score: 0%

1 -

Question 151 of 193

A 66-year-old Caucasian female presents with 3 weeks of breathlessness. She reports disturbed sleeping at night due to breathlessness. She has no known past medical history and drug history. On examination, there are bilateral crackles and 2+ lower limb oedema on the left, with calcium deposits distally and noted. Cardiovascular examination is unremarkable, Neurological examination is unremarkable except for a few small haemorrhages. The patient is afebrile, Sats 95% on room air, HR 90/min and regular. Chest x-ray demonstrates bilateral interstitial markings. What is the most important immediate management?



<input type="radio"/>	Oral amlodipine
<input checked="" type="radio"/>	Oral captopril
<input type="radio"/>	Intravenous labetalol
<input type="radio"/>	Oral high-dose prednisolone
<input type="radio"/>	Renal dialysis

Dashboard

Overall score: **0%**

1 -

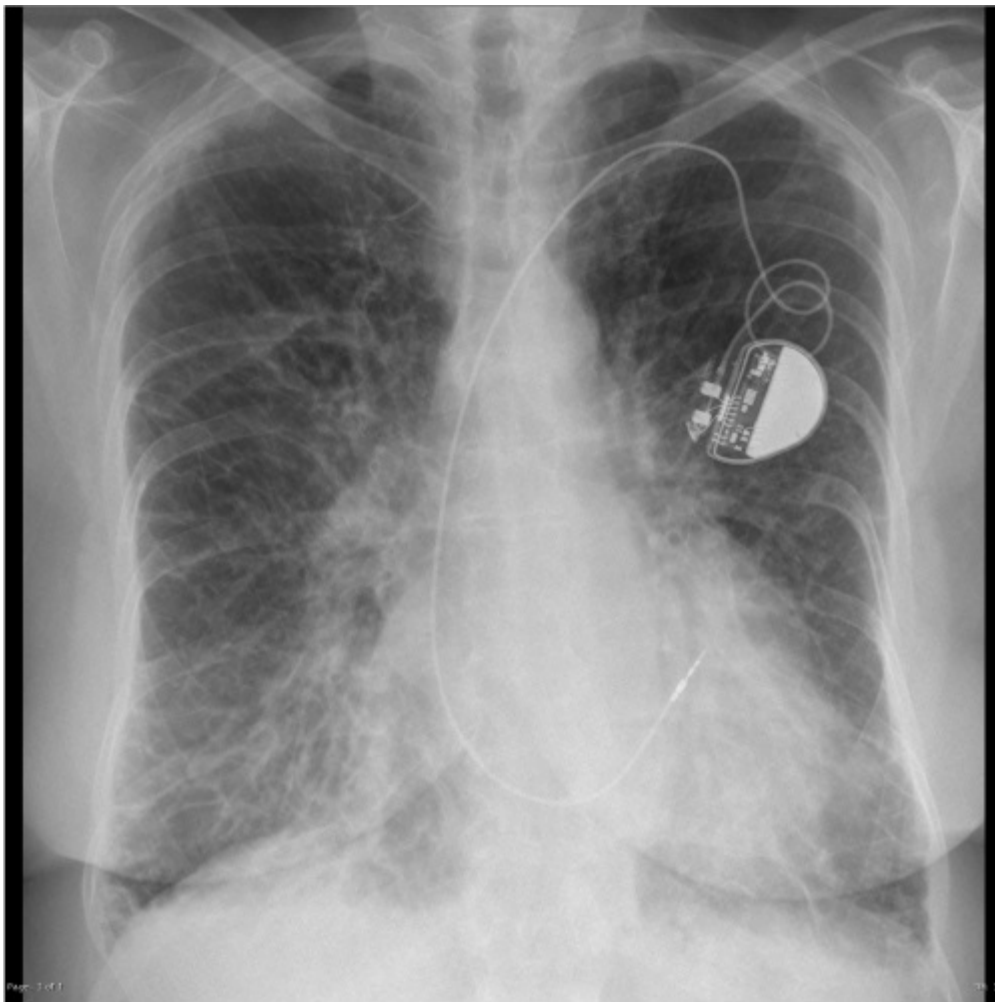
□ Question 152 of 193

□ □

An 80-year-old woman presents with dyspnoea to the Emergency Department. According to her daughter she has been getting progressively worse over the past 4 weeks. Her past medical history includes a myocardial infarction 20 years ago following which she had a 'pacemaker' inserted. She still smokes 20 cigarettes/day.

On examination her pulse is 120/min irregularly irregular. Blood pressure is 102/72 mmHg, oxygen saturations are 94% on 40% oxygen via a Venturi mask.

Her chest x-ray is shown below:



© Image used on license from Radiopaedia



What is the most appropriate initial treatment?

	Oral beta-blocker
	Low-molecular weight heparin
	Intravenous loop diuretic
	Reduce oxygen to 24% and nebulised bronchodilator
	Intravenous broad-spectrum antibiotic

Dashboard

Overall score: 0%

1 -

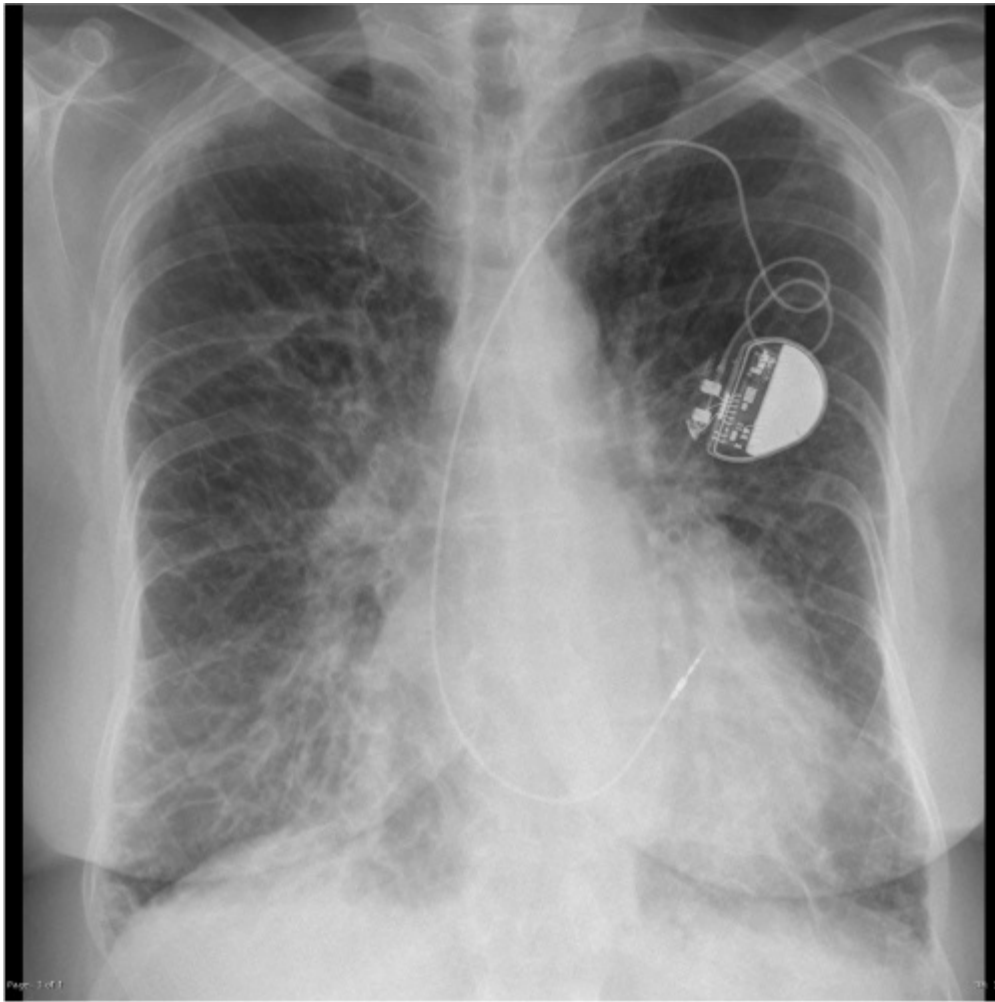
□ Question 152 of 193

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© Image used on license from Radiopaedia



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Dashboard

Overall score: **0%**

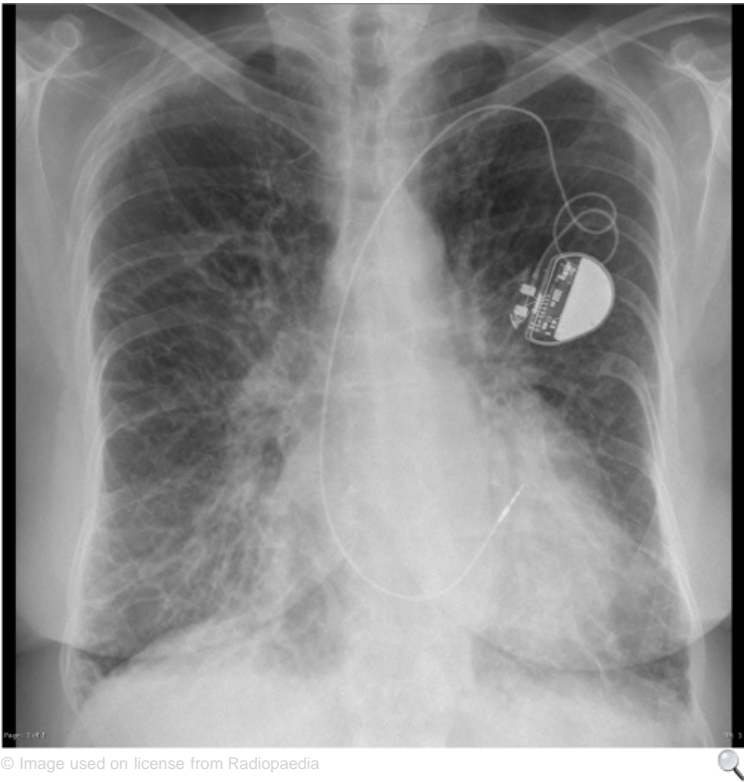
1 -

Question 152 of 193

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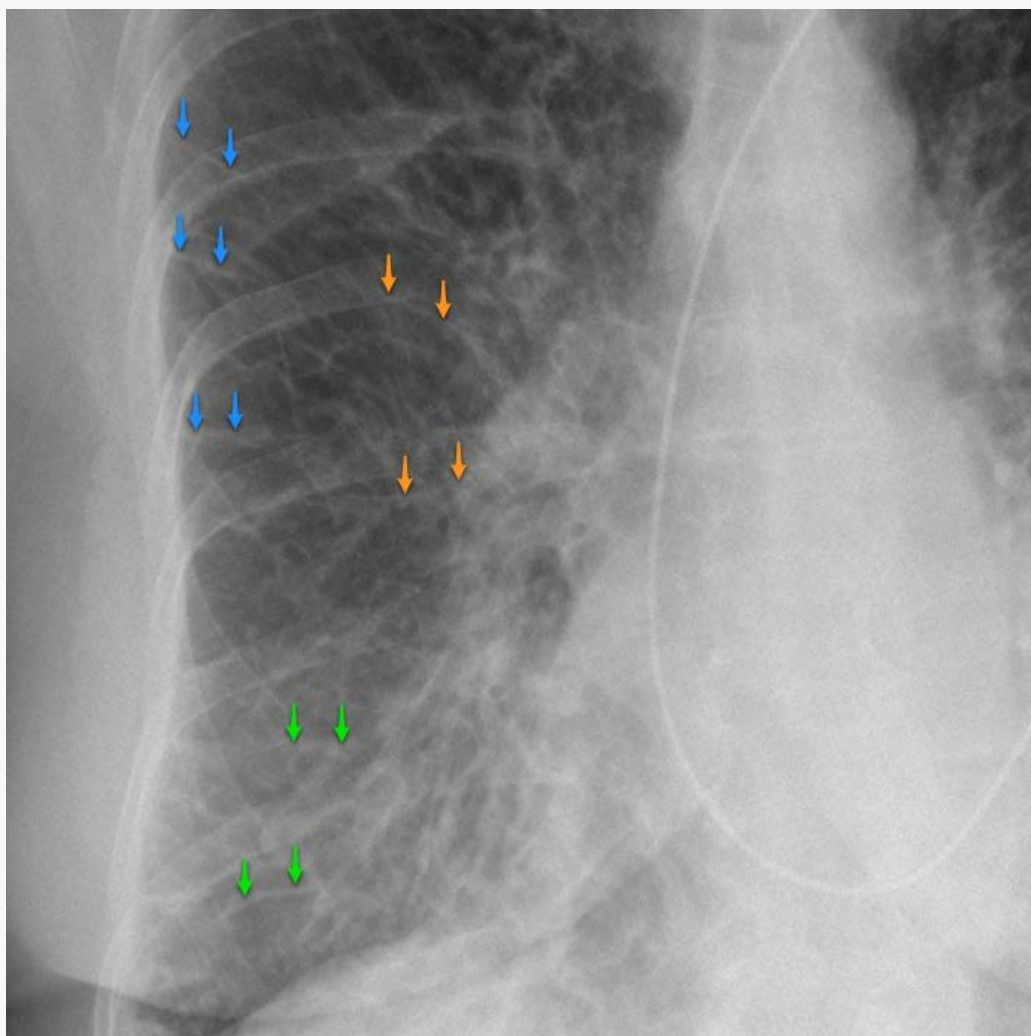


What is the most appropriate initial treatment?

	Oral beta-blocker
	Low-molecular weight heparin
	Intravenous loop diuretic
	Reduce oxygen to 24% and nebulised bronchodilator
	Intravenous broad-spectrum antibiotic

Overall score: 0%

1 -



Question 153 of 193



You are asked to review a 22-year-old female with a heart murmur. Her height is 4ft 7 inches and she reports having always been short for her year. She has been diagnosed with autoimmune hypothyroidism, for which she is taking levothyroxine replacement and is also taking 'hormone replacement to protect her bones' after her GP noted she had not started her periods by 19 years old.

On examination, you note short 4th metacarpals on both hands and lymphoedematous in her hands and feet. Auscultation of her precordium reveals an ejection systolic murmur at the left infraclavicular region. Her body mass index is 22.4 kg/m². The patient's blood tests are as follows:

Hb	123 g/l
Platelets	380 * 10 ⁹ /l
WBC	6.5 * 10 ⁹ /l

Na ⁺	144 mmol/l
K ⁺	4.8 mmol/l
Urea	7.2 mmol/l
Creatinine	110 µmol/l
Adjusted calcium	2.40 mmol/l
Phosphate	1.1 mmol/l
PTH	9 mg/dl (8.5-10.2mg/dl)

What is the underlying unifying diagnosis?

	Turner's syndrome
	Pseudohypoparathyroidism

	Pseudopseudohypoparathyroidism
	Noonan syndrome
	Down's syndrome

Dashboard

Overall score: **0%**
1 -

Question 153 of 193



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Pseudohypoparathyroidism

	Pseudopseudohypoparathyroidism
	Noonan syndrome
	Down's syndrome

Dashboard

Overall score: **0%**
1 -

Question 154 of 193

□ □

A 60-year-old woman has a heart rate of 180bpm on the medical admission unit. An ECG performed demonstrates a regular narrow-complex tachycardia. The patient complains of palpitations but no chest pain and blood pressure remains 140/95. Initial vagal maneuvers are performed including carotid massage with no success. Intravenous adenosine 6mg is given followed by a further two doses of adenosine 12mg. Unfortunately, this failed to cardiovert or reveal an interpretable underlying rhythm.

What is the next management step?

	Further adenosine
	Synchronised DC cardioversion
	Verapamil
	Digoxin
	Amiodarone

Dashboard

Overall score: 0%

1 -

Question 154 of 193

□ □

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What is the next management step?

	Further adenosine
	Synchronised DC cardioversion
	Verapamil
	Digoxin
	Amiodarone

Dashboard

Overall score: **0%**

1 -

□ Question 155 of 193



A 34 year old man attended the Emergency Department after experiencing a severe sudden onset headache at home. The pain was felt across the whole of the head and reached a 10/10 severity within a few seconds of onset. Since the headache began the patient had experienced a loud pulsatile pounding noise in his right ear. There was no reported loss of consciousness or other neurological symptoms. In the preceding days the patient had been fit and well. On close questioning he recalled that that morning he had been struck hard in the face by a soccer ball while watching his son's team.

The patient had no significant past medical history and took no medications. There was no family history of neurological disease.

On examination, the patient's right pupil was constricted compared to his left, with both pupils reactive to light. There was a partial ptosis of the right eye. Cranial nerve examination was otherwise unremarkable except for possible right hypoglossal palsy. Examination of the remainder of the peripheral nervous system was remarkable.

Details of initial investigations are given below.

CT brain (non-contrast): no acute intracranial pathology identified; normal ventricular system; no boney injury.

Lumbar puncture:

CSF red cells	2 / mm ³
CSF white cells	4 / mm ³
CSF gram stain	unremarkable
CSF glucose	60 % serum level
CSF protein	0.65 g / L
CSF	negative for haemoglobin break down products

What is the correct diagnosis?

Vertebral artery dissection

	Internal carotid artery dissection
	Posterior reversible encephalopathy syndrome
	Reversible cerebrovascular vasoconstriction syndrome
	Posterior communicating artery aneurysm

Dashboard

Overall score: **0%**

1 -

Question 155 of 193

□ □

A 34 year old man attended the Emergency Department after experiencing a severe sudden onset headache at home. The pain was felt across the whole of the head and reached a 10/10 severity within a few seconds of onset. Since the headache began the patient had experienced a loud pulsatile pounding noise in his right ear. There was no reported loss of consciousness or other neurological symptoms. In the preceding days the patient had been fit and well. On close questioning he recalled that that morning he had been struck hard in the face by a soccer ball while watching his son's team.

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	Internal carotid artery dissection
	Posterior reversible encephalopathy syndrome
	Reversible cerebrovascular vasoconstriction syndrome
	Posterior communicating artery aneurysm

Dashboard

Overall score: **0%**

1 -

Question 156 of 193

□ □

An 89-year-old gentleman presented to the general medical clinic with complaints of palpitations. He was diagnosed with atrial fibrillation (AF) three months ago and started on bisoprolol. This was part of a plan to rate control, rather than rhythm control, his AF. The bisoprolol has been up-titrated as his symptoms did not come under control with his dose. Palpitations occur almost every day but are not associated with any other symptoms. He also has a history of ischaemic heart disease with a myocardial infarction five years ago and type 2 diabetes mellitus. He currently takes bisoprolol, metformin, aspirin and simvastatin. He has declined anticoagulation with warfarin or NOAC despite the risk as his wife died from an intracranial bleed whilst taking warfarin.

On examination, his heart rate is 94/min and irregular. His chest is clear on auscultation and there is no peripheral oedema. How should he be further managed?

	Amiodarone
	Dronedarone
	Amlodipine
	Diltiazem
	Left atrial ablation

Dashboard

Overall score: 0%

1 -

Question 156 of 193

□ □

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On examination, his heart rate is 94/min and irregular. His chest is clear on auscultation and there is no peripheral oedema. How should he be further managed?

	Amiodarone
	Dronedarone
	Amlodipine
	Diltiazem
	Left atrial ablation

Dashboard

Overall score: **0%**

1 -

Question 157 of 193

An 85-year-old man has an ambulatory blood pressure monitoring reading of 142/84 mmHg. He has no past medical history of coronary heart disease, renal disease or diabetes, and his only regular medication is lansoprazole. His 10-year cardiovascular risk score was recently calculated to be 18%. Management should include follow up with which one of the following?

<input type="checkbox"/>	Lifestyle advice
<input type="checkbox"/>	Calcium channel blocker
<input type="checkbox"/>	Diuretic
<input type="checkbox"/>	ACE inhibitor
<input type="checkbox"/>	Beta-blocker

Dashboard

Overall score: **0%**

1 -

Question 157 of 193

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	Lifestyle advice
	Calcium channel blocker
	Diuretic
	ACE inhibitor
	Beta-blocker

Dashboard

Overall score: **0%**

1 -

□ Question 157 of 193

□ □

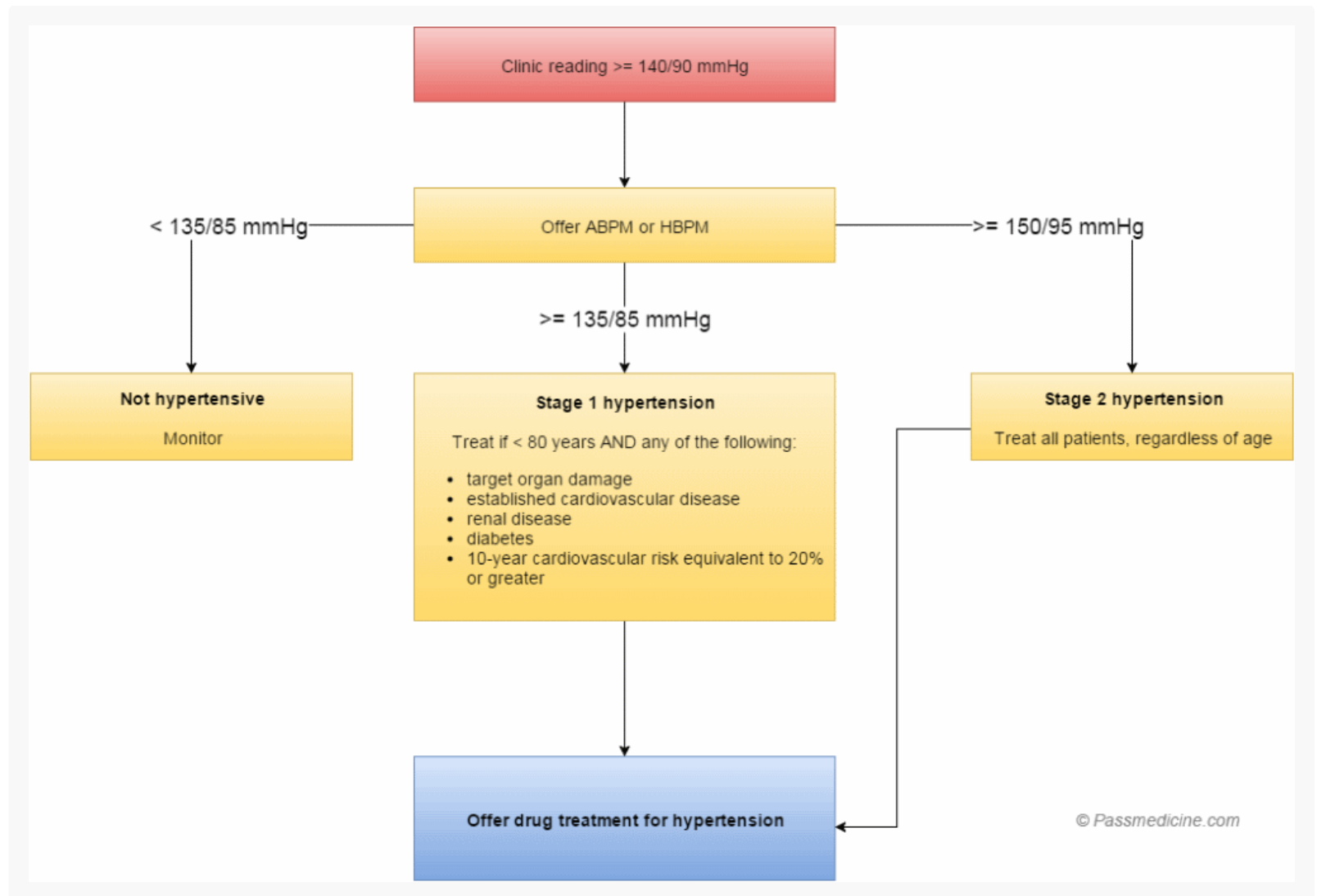
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	Diuretic
	ACE inhibitor
	Beta-blocker

Dashboard

Overall score: 0%

1 -



□ Question 157 of 193

□ □

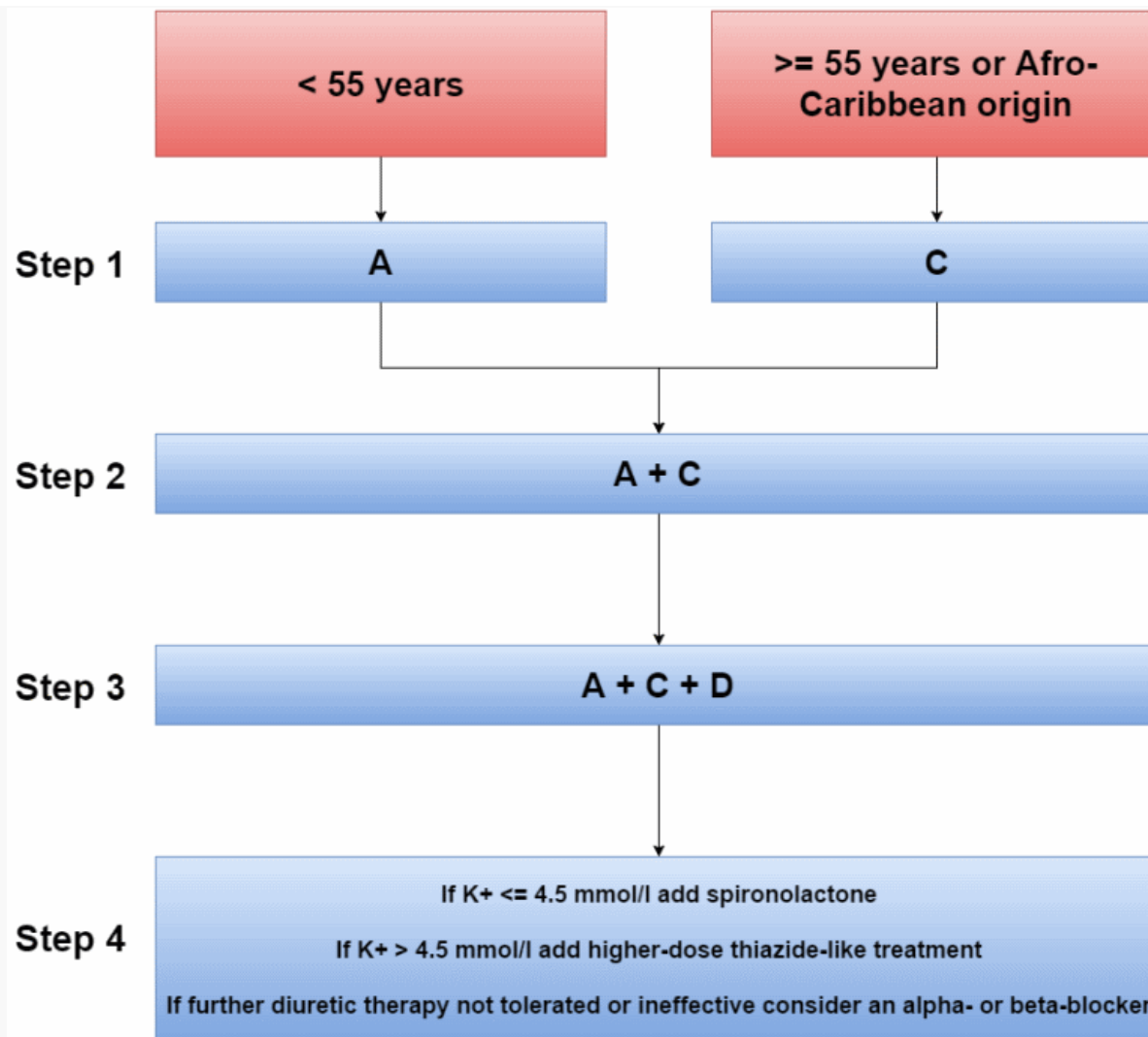
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	Lifestyle advice
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	Beta-blocker

Dashboard

Overall score: 0%

1 -



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Key

A = ACE inhibitor

C = Calcium channel blocker

D = Thiazide Diuretic

Question 158 of 193

□ □

A 26 year old male was recently diagnosed with Brugada syndrome after two episodes of cardiogenic syncope, associated with ECG changes demonstrating ECG changes demonstrated a prolonged QT interval. He undergoes an ICD insertion electively and would like your advice prior to discharge. He works as a software programmer in a business park about 10 miles outside the town centre, he normally drives to and from work. What is the DVLA regulation regarding driving after ICD implantation?

	No limits on driving
	No driving for 1 week
	No driving for 6 weeks
	No driving for 6 months
	No driving for 1 year

Dashboard

Overall score: 0%

1 -

Question 158 of 193

□ □

A 26 year old male was recently diagnosed with Brugada syndrome after two episodes of cardiogenic syncope, associated with ECG changes demonstrating ECG changes demonstrated a prolonged QT interval. He undergoes an ICD insertion electively and would like your advice prior to discharge. He works as a software programmer in a business park about 10 miles outside the town centre, he normally drives to and from work. What is the DVLA regulation regarding driving after ICD implantation?

	No limits on driving
	No driving for 1 week
	No driving for 6 weeks
	No driving for 6 months
	No driving for 1 year

Dashboard

Overall score: **0%**

1 -

Question 159 of 193

□ □

A 60-year-old woman is referred to the general respiratory clinic with increasing shortness of breath over the last nine month months. This has been associated with pedal oedema. There is no orthopnoea, paroxysmal nocturnal dyspnea or cough. Her past medical history includes bilateral extensive pulmonary emboli and she is currently taking warfarin. She has no other lung disease and she does not smoke.

On examination her chest is clear but auscultation demonstrates a loud second heart sound. There is also a right ventricular heave with visible V-waves on jugular venous pressure.

A recent CT pulmonary angiogram showed resolution of the thrombus. Echocardiogram demonstrates severe right heart dilatation and impaired function with moderate tricuspid regurgitation.

What test will most likely provide a formal diagnosis?

	Cardiac MR imaging
	Right heart catheterisation
	Left heart catheterisation
	Brain natriuretic peptide (BNP) measurement
	6-minute walk test

Dashboard

Overall score: 0%

1 -

Question 159 of 193

□ □

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	Right heart catheterisation
	Left heart catheterisation
	Brain natriuretic peptide (BNP) measurement
	6-minute walk test

Dashboard

Overall score: **0%**

1 -

□ Question 160 of 193

□ □

A 72-year-old man is admitted to hospital with shortness-of-breath. On examination his pulse is 96/min, BP 100/64 mmHg, respiratory rate 20/min, temperature 37.5°C, oxygen saturations 96% on room air. A 12-lead ECG shows sinus rhythm, at a rate of 94/min with no diagnostic ST-T changes. The troponin I level is $< 0.05 \mu\text{g/L}$. A CT chest (with contrast) is ordered:



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What is the most likely diagnosis?

	Superior vena cava obstruction

	Aortic dissection (Stanford type A)
	Infective endocarditis
	Aortic dissection (Stanford type B)
	Pulmonary embolism

Dashboard

Overall score: **0%**
1 -

□ Question 160 of 193

□ □

A 72-year-old man is admitted to hospital with shortness-of-breath. On examination his pulse is 96/min, BP 100/64 mmHg, respiratory rate 20/min, temperature 37.5°C, oxygen saturations 96% on room air. A 12-lead ECG shows sinus rhythm, at a rate of 94/min with no diagnostic ST-T changes. The troponin I level is $< 0.05 \mu\text{g/L}$. A CT chest (with contrast) is ordered:



© Image used on license from Radiopaedia

What is the most likely diagnosis?

Superior vena cava obstruction

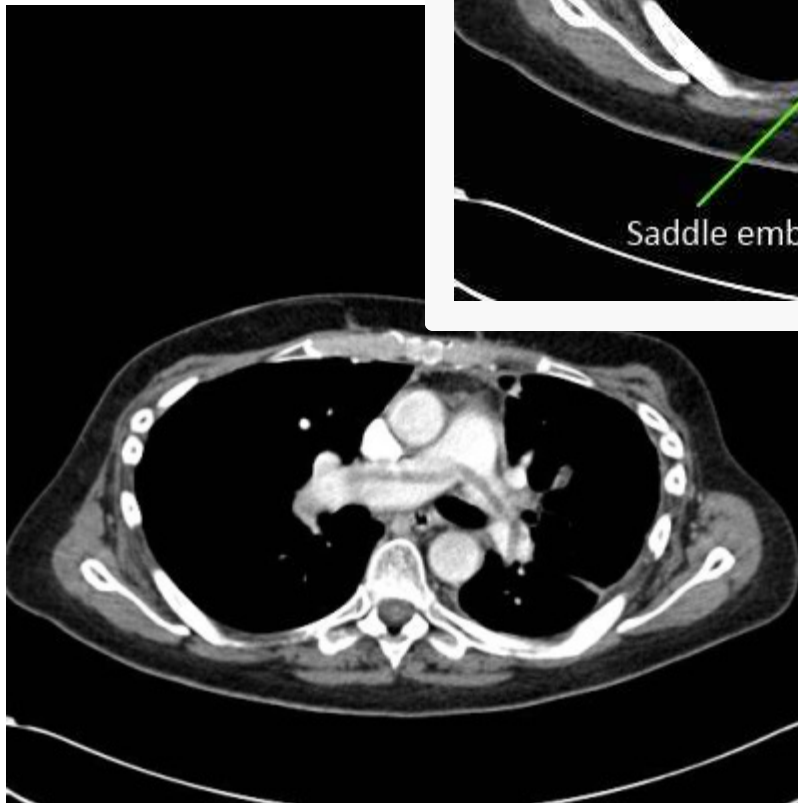
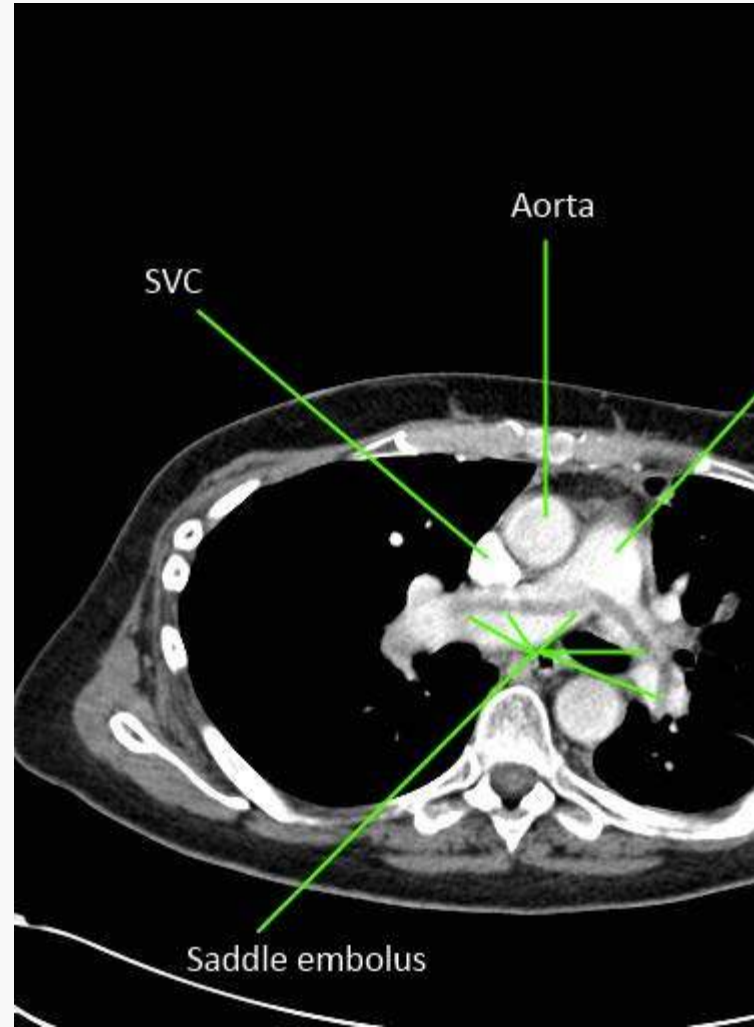
	Aortic dissection (Stanford type A)
	Infective endocarditis
	Aortic dissection (Stanford type B)
	Pulmonary embolism

Dashboard

Overall score: **0%**
1 -

□ Question 160 of 193

A 72-year-old man is admitted to hospital with shortness-of-breath, blood pressure 100/60 mmHg, respiratory rate 20/min, temperature 37.5°C, oxygen saturation 92% on 2L oxygen, regular rhythm, at a rate of 94/min with no diagnostic ST-T changes. A CT scan of the chest (contrast) is ordered:



© Image used on license from Radiopaedia

What is the most likely diagnosis?

Superior vena cava obstruction

	Aortic dissection (Stanford type A)
	Infective endocarditis
	Aortic dissection (Stanford type B)
	Pulmonary embolism

Dashboard

Overall score: **0%**
1 -

□ Question 160 of 193

□ □

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© Image used on license from Radiopaedia

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Superior vena cava obstruction

	Aortic dissection (Stanford type A)
	Infective endocarditis
	Aortic dissection (Stanford type B)
	Pulmonary embolism

Dashboard

Overall score: **0%**
1 -

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CONTRAST

CT Angiogram Pulmonar

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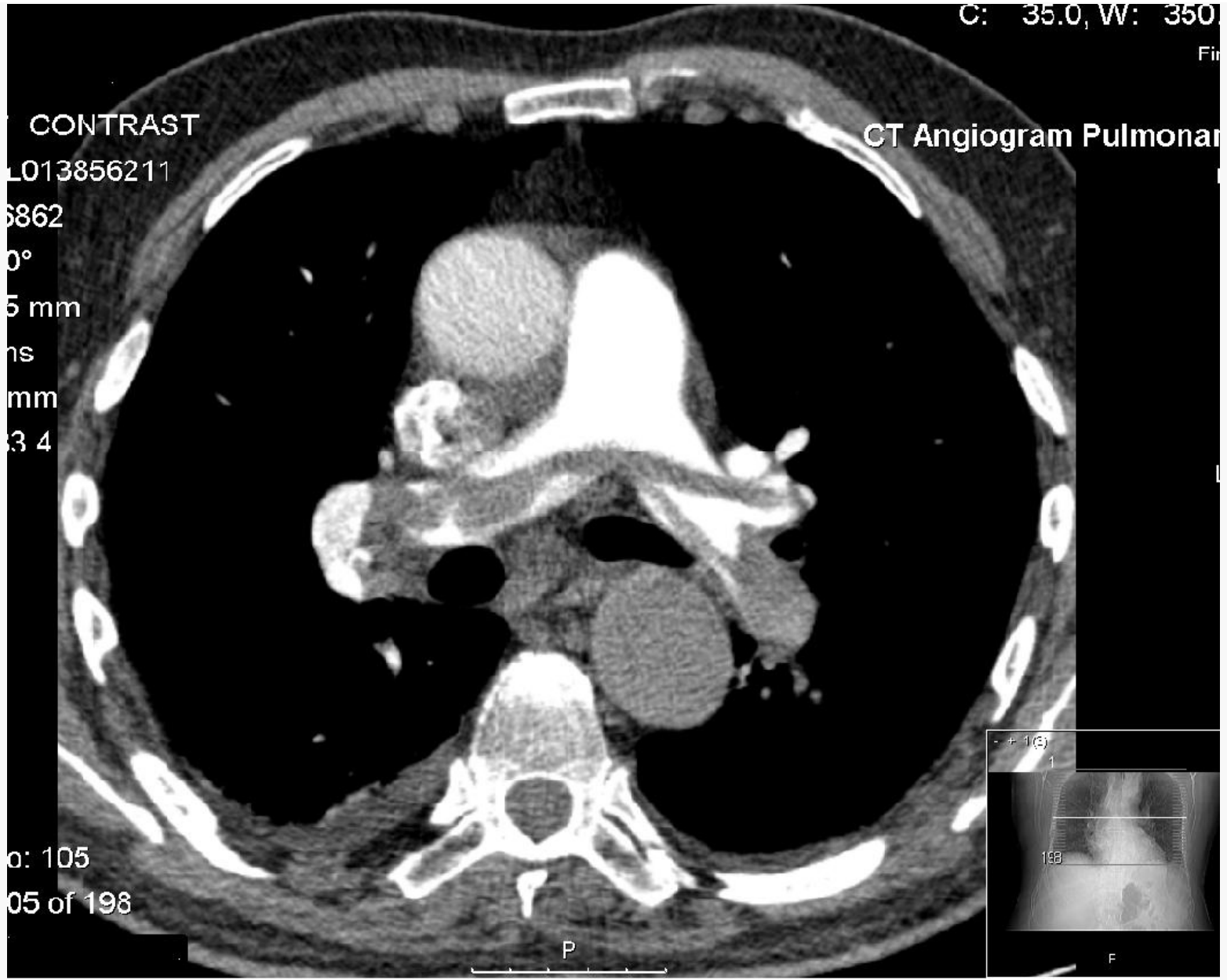
05 of 198

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Question 161 of 193

A 58 year-old male is seen in cardiology outpatients clinic. He has a background of type 2 diabetes and hypercholesterolaemia. He complains of a 6 month history of a constricting discomfort in the front of his chest, precipitated by walking up the hill to his house. The pain is relieved by rest within about 5 minutes. He is currently prescribed a sublingual nitrate spray and is taking 10mg bisoprolol once a day. Cardiovascular and respiratory examination is unremarkable. a 12-lead ECG is normal.

What would be the most appropriate additional medication?

<input type="checkbox"/>	Amlodipine
<input type="checkbox"/>	Isosorbide mononitrate
<input type="checkbox"/>	Ivabradine
<input type="checkbox"/>	Nicorandil
<input type="checkbox"/>	Ranolazine

Dashboard

Overall score: 0%

1 -

Question 161 of 193

□ □

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	Amlodipine
	Isosorbide mononitrate
	Ivabradine
	Nicorandil
	Ranolazine

Dashboard

Overall score: **0%**

1 -

Question 162 of 193



A 72 year old admitted to hospital with VF arrest. The ambulance crew reported an out-of-hospital downtime for 3 minutes before CPR was commenced. In A&E resus, CPR was successful and the patient was intubated after the return of spontaneous circulation. 3 days later, on extubation, the ITU consultant notes confusion and bilateral upper limb weakness, confirmed to be new with a collateral history. A CT head, followed by MRI head, demonstrates bilateral small areas of ischaemic change in bilateral posterior parietal lobes, between middle and posterior cerebral artery territories. CT angiography demonstrates 45% RICA stenosis, 60% L ICA stenosis. The cardiac monitor demonstrates atrial fibrillation and echocardiogram demonstrates septal akinesia, consistent with recent MI. What is the likely cause of this patients stroke?

	Cardiac mural thrombus
	Left carotid artery stenosis
	Right carotid artery stenosis
	Hypotension during cardiac arrest
	Cardioembolic disease

Dashboard

Overall score: 0%

1 -

Question 162 of 193

□ □

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	Left carotid artery stenosis
	Right carotid artery stenosis
	Hypotension during cardiac arrest
	Cardioembolic disease

Dashboard

Overall score: **0%**

1 -

□ Question 163 of 193

□ □

An 82-year-old lady presented with shortness of breath and palpitations. These came on suddenly whilst she was watching television. She had a sedentary lifestyle and recently had been confined to bed with an upper respiratory tract infection. After this she had noticed that her ankles and legs were more swollen than usual, in particular her left leg. On further questioning she said that she had always needed three pillows to sleep but had recently required an extra pillow.

Her past medical history included hypertension, hypothyroidism, asthma and known coronary artery disease.

On examination her pulse was irregularly irregular. The jugular venous pressure was 6cm above the manubriosternal angle. Heart sounds were normal with no added sounds. On auscultation of the lung fields there were coarse crepitations at both bases. There was bilateral pitting oedema to the knees more marked on the left. The circumference of the left leg was 2cm greater than the right.

Observations:

- Heart rate: 128 beats per minute
- SaO₂: 92% on room air
- Respiratory rate: 22 breaths per minute
- Temperature: 36.8 degrees Celsius
- Blood pressure: 110/68 mmHg

Investigations:

- 12-lead electrocardiogram: atrial fibrillation with a fast ventricular response, left ventricular hypertrophy
- Chest X-ray: cardiomegaly, Kerley B lines, small bilateral pleural effusions, pulmonary oedema
- Echocardiogram: poor biventricular function with an ejection fraction of 35%
- Computed Tomography Pulmonary Angiogram: small segmental pulmonary embolus

This lady was anticoagulated appropriately. Following this acute episode she improved clinically but remained in atrial fibrillation.

Given the clinical information available which of the following is the most appropriate drug to control her heart rate in the long term?

--	--

	Metoprolol
	Digoxin
	Diltiazem
	Flecainide
	Warfarin

Dashboard

Overall score: **0%**
1 -

□ Question 163 of 193

□ □

An 82-year-old lady presented with shortness of breath and palpitations. These came on suddenly whilst she was watching television. She had a sedentary lifestyle and recently had been confined to bed with an upper respiratory tract infection. After this she had noticed that her ankles and legs were more swollen than usual, in particular her left leg. On further questioning she said that she had always needed three pillows to sleep but had recently required an extra pillow.

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Dashboard

Overall score: **0%**
1 -

Question 164 of 193

□ □

An 84-year-old male was admitted to the coronary care unit (CCU) after being admitted as a primary percutaneous coronary intervention (PPCI) call for sudden onset chest pain and ST elevation on anterior leads of his ECG. Angiography demonstrated a mid-left anterior descending artery acute occlusion likely secondary to plaque rupture that was stented with a drug-eluting stent. Two hours after being admitted to CCU, he complained of nausea and vomited twice, which settled after being prescribed cyclizine by a passing medical senior house officer. Thirty minutes afterwards, you are asked to see the patient as the patient has become increasingly short of breath. He complains of no new chest pain, nausea, vomiting, sweating or palpitations. Interrogation of his cardiac telemetry reveals a new sinus tachycardia only without other arrhythmias. On examination, the patient is in respiratory distress, with bibasal inspiratory crackles and raised jugular venous pulse.

His observations are as follows: blood pressure is 186/80 mmHg, heart rate 120 beats per minute and regular, Sats 92% on 3 litres, respiratory rate 33/min.

A repeat 12-lead ECG reveals no new ST elevation changes or other ischaemic changes. A portable chest radiograph demonstrates bibasal alveolar oedema and bilateral small pleural effusions. What is the cause of the patient's deterioration?

	In-stent thrombosis
	Pulmonary embolus
	New independent cardiac ischaemic occlusion
	Cyclizine induced heart failure
	Cardiac tamponade secondary to cardiac instrumentation

Dashboard

Overall score: 0%

Question 164 of 193

□ □

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	Pulmonary embolus
	New independent cardiac ischaemic occlusion
	Cyclizine induced heart failure
	Cardiac tamponade secondary to cardiac instrumentation

Dashboard

Overall score: **0%**

Question 165 of 193

A 53-year-old woman has recently been diagnosed with idiopathic pulmonary arterial hypertension following right heart catheterisation. She has undergone further testing and found to be responsive to bronchodilator therapy. She takes no regular medications currently and has no other comorbidities. She is symptomatic suffering from a significant reduction in exercise tolerance. What is the most appropriate initial treatment?

<input type="checkbox"/>	Prostacyclin analogues
<input type="checkbox"/>	Calcium channel blocker
<input type="checkbox"/>	Phosphodiesterase type-5 inhibitor
<input type="checkbox"/>	Lung transplant
<input type="checkbox"/>	Atrial septostomy

Dashboard

Overall score: **0%**

1 -

Question 165 of 193

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<input type="radio"/>	Phosphodiesterase type-5 inhibitor
<input type="radio"/>	Lung transplant
<input type="radio"/>	Atrial septostomy

Dashboard

Overall score: **0%**

1 -

Question 166 of 193

□ □

A 49-year-old Afro-Caribbean man is diagnosed with hypertension. He has no significant past medical history and remains asymptomatic. His 24 hour blood pressure monitoring shows an average of 165/97mm Hg. Which of the following drugs should be used initially to lower his blood pressure?

	Ramipril
	Bisoprolol
	Amlodipine
	Indapamide
	Furosemide

Dashboard

Overall score: 0%

1 -

Question 166 of 193

A 49-year-old Afro-Caribbean man is diagnosed with hypertension. He has no significant past medical history and remains asymptomatic. His 24 hour blood pressure monitoring shows an average of 165/97mm Hg. Which of the following drugs should be used initially to lower his blood pressure?

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<input checked="" type="checkbox"/>	Amlodipine
<input type="checkbox"/>	Indapamide
<input type="checkbox"/>	Furosemide

Dashboard

Overall score: **0%**

1 -

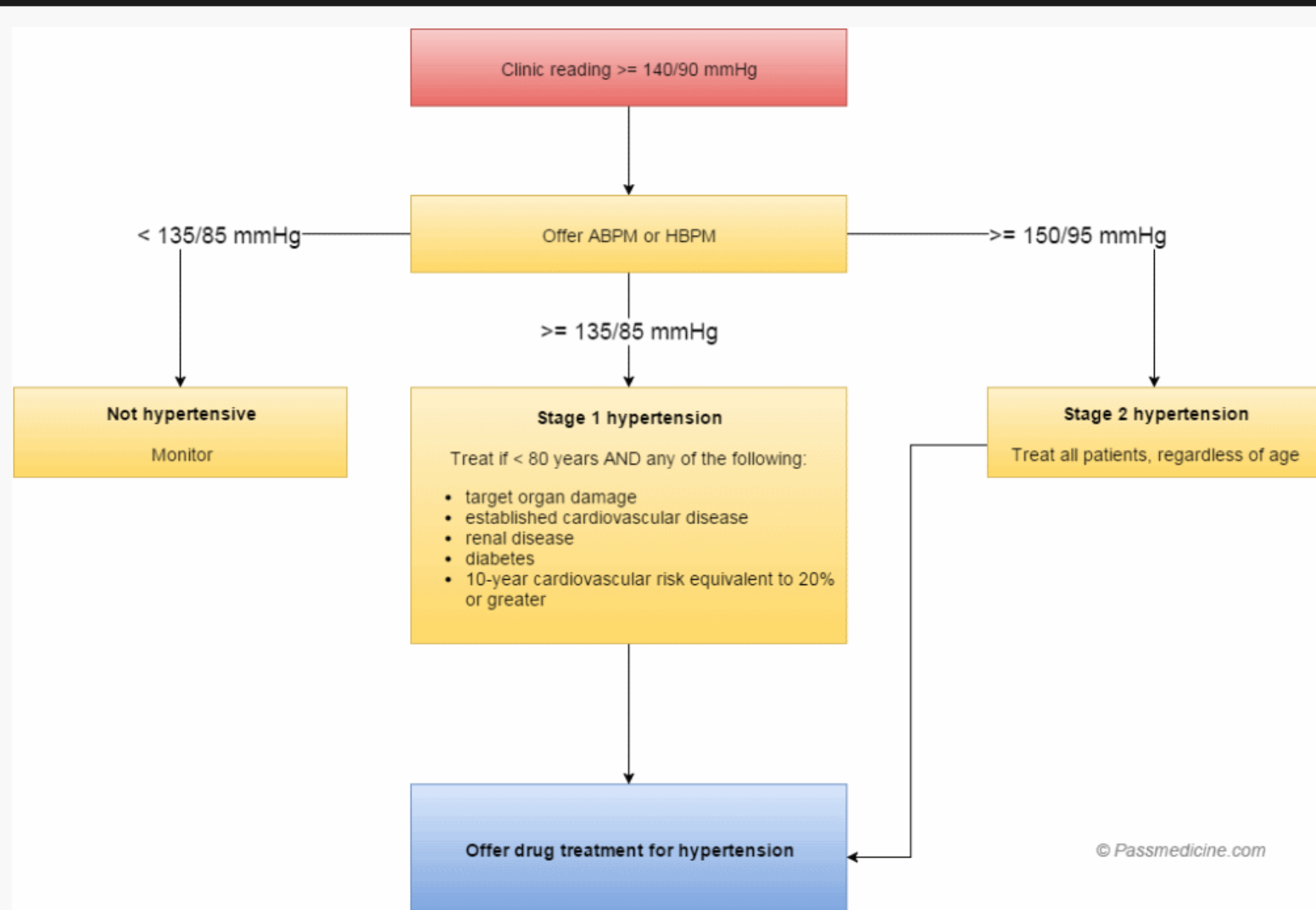
Question 166 of 193

A 49-year-old Afro-Caribbean man has a clinic blood pressure of 165/97 mmHg. What is the most appropriate management?

	Ramipril
	Bisoprolol
	Amlodipine
	Indapamide
	Furosemide

Overall score: 0%

1 -



Question 166 of 193

□ □

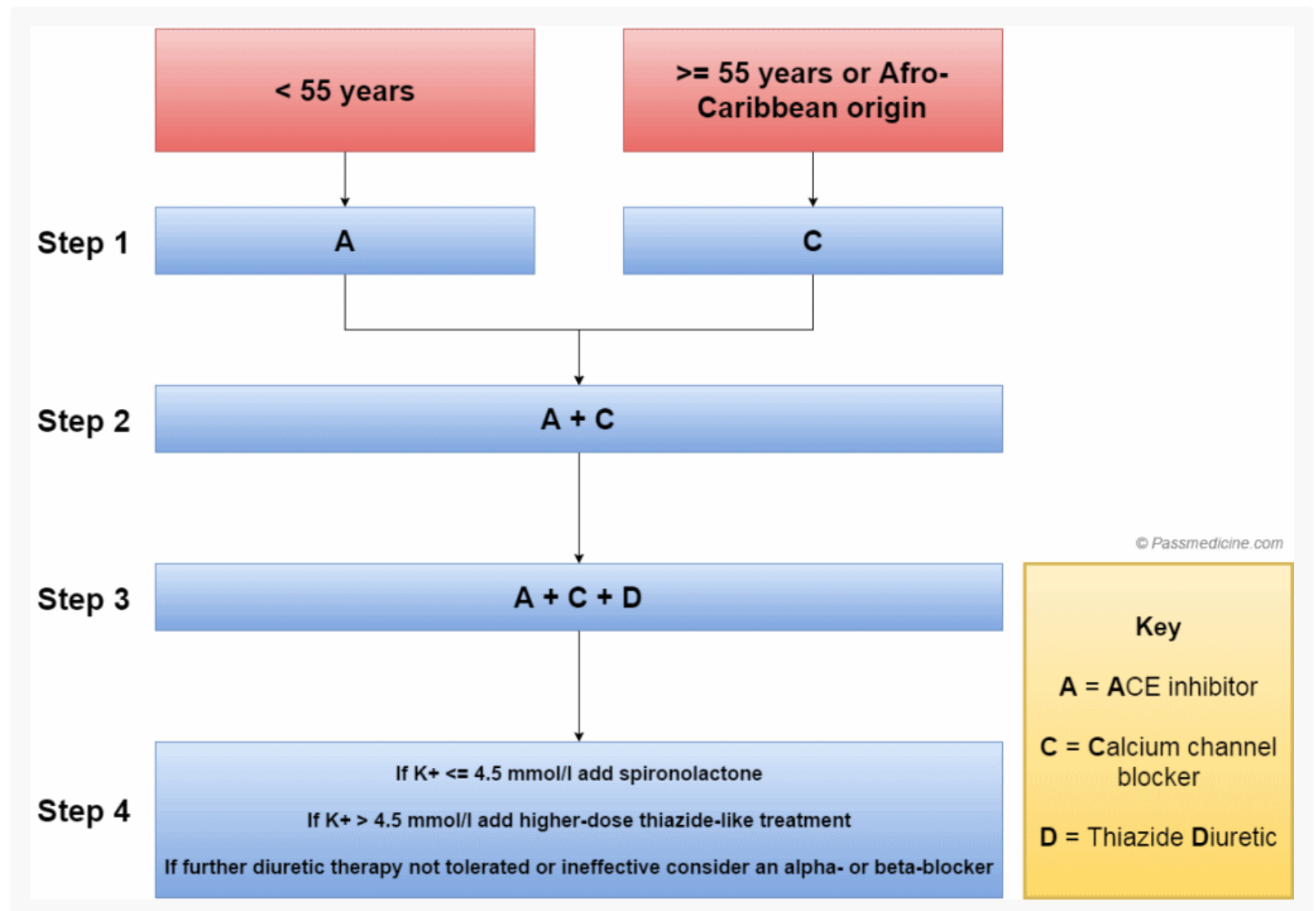
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	Bisoprolol
	Amlodipine
	Indapamide
	Furosemide

Dashboard

Overall score: **0%**

1 -



Question 167 of 193

□ □

An 89-year-old lady presents acutely short of breath and distressed. She has a background of previous myocardial infarction (MI) and hypertension. She is now coughing up white sputum. Examination reveals bilateral coarse crepitations throughout the lung fields. She has a raised jugular venous pressure and peripheral oedema. Observations are a respiratory rate of 35/min, oxygen saturations of 92% on 15 litres of oxygen per minute, blood pressure 135/90 mmHg, heart rate 100/min. Chest X-ray reveals widespread interstitial shadowing. Intravenous furosemide has been given but the patient fails to improve. Which of the following would be useful in treating this patient?

	Intravenous antibiotics
	Oral furosemide
	Bilevel positive airway pressure
	Continuous positive airway pressure
	Chest physiotherapy

Dashboard

Overall score: 0%

1 -

□ Question 167 of 193

□ □

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	Intravenous antibiotics
	Oral furosemide
	Bilevel positive airway pressure
	Continuous positive airway pressure
	Chest physiotherapy

Dashboard

Overall score: **0%****1** -

Question 168 of 193

□ □

A 56-year-old Caucasian male patient with no history of ischaemic heart disease had a non-ST elevation myocardial infarction 20 days ago and was started on aspirin, atorvastatin, bisoprolol and enalapril as an inpatient. He has been discharged to your care in the cardiology outpatients department. He presents for review 1 month later saying he remains breathless on minimal exertion (walking 50 metres) with no chest pains. There is no evidence of pulmonary oedema on examination. A recent echocardiogram shows a left ventricular ejection fraction of 40%. His beta natriuretic peptide level is 436 pg/mL (normal <100 pg/mL).

What would be most appropriate to add to his oral therapy?

	Furosemide
	Spironolactone
	Hydralazine and isosorbide dinitrate (modified release)
	Irbesartan
	Ivabradine

Dashboard

Overall score: 0%

1 -

Question 168 of 193

□ □

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	Hydralazine and isosorbide dinitrate (modified release)
	Irbesartan
	Ivabradine

Dashboard

Overall score: **0%**

1 -

Question 169 of 193

□ □

A 42-year-old woman is reviewed in cardiology clinic following investigation with a Holter monitor. This demonstrated paroxysmal episodes of irregular tachycardia without p-waves. She originally presented with palpitations which are self-limiting in nature. She has a past medical history of hypertension, depression, hypothyroidism and migraines. She takes ramipril, sertraline, levothyroxine and uses aspirin to control her migraines. She drinks one bottle of wine per day and has been attempting to reduce this with community support. Her observations are all within normal range, including her blood pressure which is 132/75mmHg. On examination, there is no evidence of decompensation and she has a regular pulse. What factors should be including when assessing her risk for bleeding when considering anticoagulation?

	Hypertension
	Sex
	Migraines
	Depression
	Alcohol history

Dashboard

Overall score: 0%

1 -

Question 169 of 193

□ □

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	Hypertension
	Sex
	Migraines
	Depression
	Alcohol history

Dashboard

Overall score: **0%**

1 -

Question 170 of 193

□ □

A 45-year-old male patient presents with a worsening shortness of breath to the medical assessment unit. His has an accompanying letter from his GP stating that his past medical history is significant only for a deteriorating renal function that is secondary to polycystic kidney disease.

On examination there is no evidence of fluid overload, with the lung fields remaining clear and the JVP not elevated. You do however discern a late systolic murmur heard best at the cardiac apex which is immediately preceded by a 'click'.

Observations

- heart rate 82bpm
- blood pressure 106/86mmHg
- respiratory Rate 16 per minute
- temperature 36.5
- oxygen Saturation 97% on room air

	Mitral valve prolapse
	Mitral stenosis
	Pulmonary stenosis
	Mitral regurgitation
	Aortic stenosis

Dashboard

Overall score: 0%

1 -

Question 170 of 193

□ □

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- respiratory Rate 16 per minute
- temperature 36.5
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	Mitral stenosis
	Pulmonary stenosis
	Mitral regurgitation
	Aortic stenosis

Dashboard

Overall score: **0%**

1 -

□ Question 171 of 193

□ □

A 52-year-old female who you see regularly represents to your clinic after routine blood tests having recently been started on ramipril for her hypertension. Her blood pressure (BP) prior to initiation of ramipril in the clinic was 145/98mmHg and her baseline creatinine prior to treatment was 100umol/L. On review today her clinic BP appears to be well controlled at 132/84mmHg and her bloods show her creatinine has risen to 125umol/L. What is the most appropriate step in the management of her hypertension?

<input type="checkbox"/>	Reduce dose of ramipril
<input type="checkbox"/>	Continue current dose of ramipril
<input type="checkbox"/>	Stop ramipril and consider angiotensin receptor blocker
<input type="checkbox"/>	Increase dose of ramipril
<input type="checkbox"/>	Stop ramipril and consider calcium channel blocker

Dashboard

Overall score: 0%

1 -

□ Question 171 of 193

□ □

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Dashboard

Overall score: **0%**

1 -

Question 171 of 193

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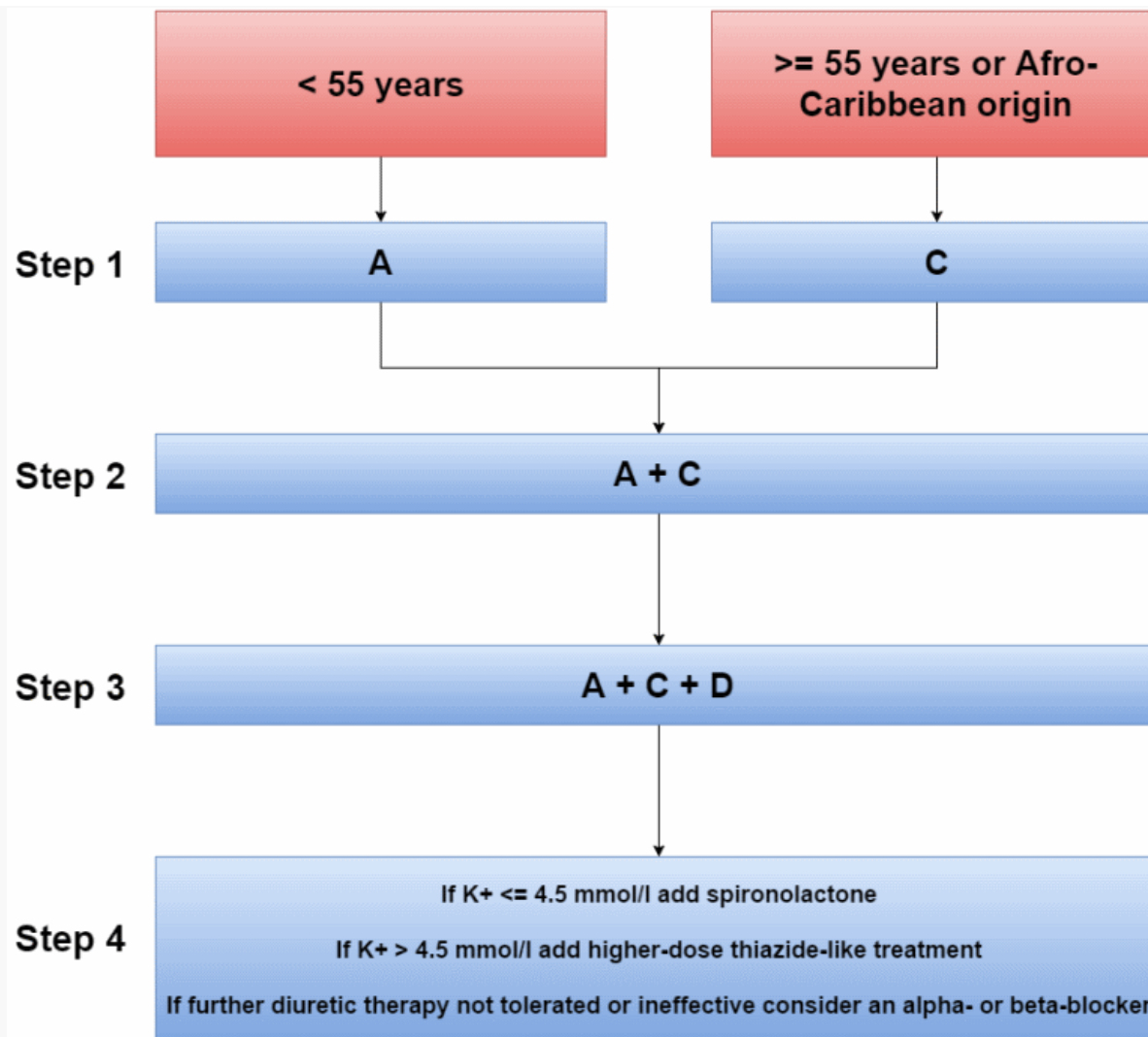
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	Stop ramipril and consider calcium channel blocker

Dashboard

Overall score: **0%**

1 -



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Key

A = ACE inhibitor

C = Calcium channel blocker

D = Thiazide Diuretic

Question 172 of 193

□ □

A 64-year-old hypertensive male presents to the emergency department with a history of sudden onset tearing chest pain. He is a chronic smoker with a 25 pack year history. He takes valsartan 160mg daily and amlodipine 5mg daily.

On examination, he is distressed and in severe pain. Blood pressure is 200/120 mmHg. The peripheral pulses are weak and his heart rate is 125 bpm.

Sublingual nitrates and oral aspirin are given to him in the emergency department and his twelve-lead ECG is performed which reveals tachycardia, left ventricular strain and deep S waves in lead V1-V3 and tall R waves in V4-V6.

Chest x-ray shows widening of the mediastinum with an irregular aortic contour.

Contrast-enhanced CT scan of the chest reveals an aortic intimal flap distal to left subclavian artery.

Which of the following is the most appropriate treatment option for this patient?

	Blood pressure control with IV beta-blockers
	Percutaneous stent insertion
	Surgical repair
	Blood pressure control with IV hydralazine
	Continuous infusion of isosorbide dinitrate

Dashboard

Overall score: 0%

1 -

Question 172 of 193

□ □

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Dashboard

Overall score: **0%**

1 -

Question 172 of 193

A 64-year-old hypertensive male presents to the emergency department with severe chest pain. He is a chronic smoker with a 25 pack year history of smoking.

On examination, he is distressed and in severe pain. His blood pressure is 180/100 mmHg and his heart rate is 125 bpm.

Sublingual nitrates and oral aspirin are given to him. ECG shows ST segment depression in leads II, III, aVF, which reveals tachycardia, left ventricular strain and ST segment depression.

Chest x-ray shows widening of the mediastinum with aortic dissection.

Contrast-enhanced CT scan of the chest reveals an aortic dissection.

Which of the following is the most appropriate treatment?



	Blood pressure control with IV beta-blockers
	Percutaneous stent insertion
	Surgical repair
	Blood pressure control with IV hydralazine
	Continuous infusion of isosorbide dinitrate

Dashboard

Overall score: 0%

1 -

Question 172 of 193

□ □

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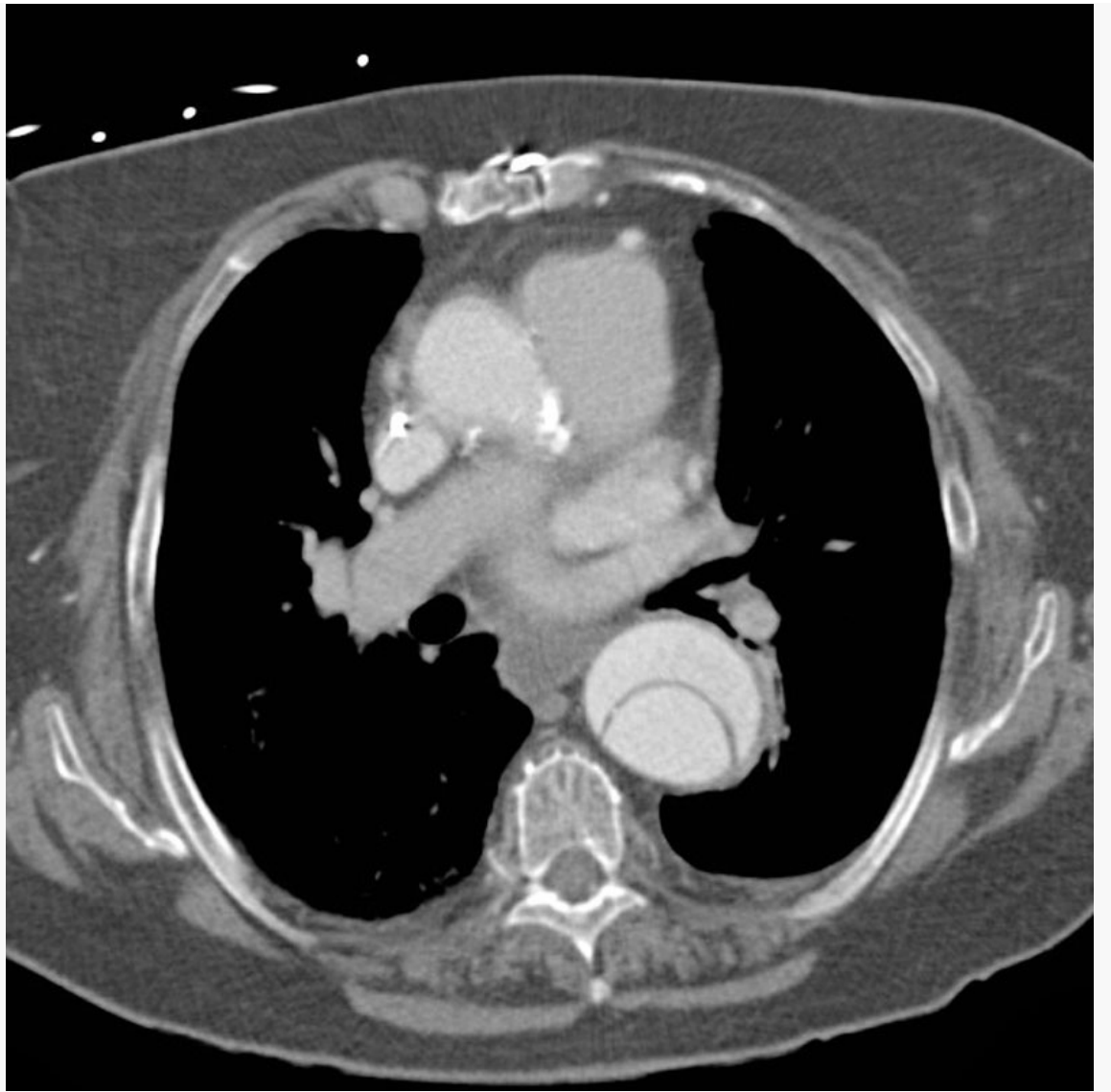
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Dashboard

Overall score: 0%

1 -



Question 173 of 193

□ □

A 63-year-old gentleman is reviewed by his GP. He has a past medical history of ischaemic heart disease having suffered a myocardial infarction two years ago, hypertension, elevated cholesterol. He is a current smoker with a 25 pack-year history. He has been having no problems at home and has been looking forward to retiring from his job in the insurance industry. He lives at home with his wife. He has two children; one suffers from hypothyroidism but otherwise, they are well. His father died of a heart attack at the age of 55 years. He came in for a medication review. He takes aspirin, ramipril, atorvastatin and amlodipine. He has no problems with his medications.

On examination, he is found to have an irregularly irregular rhythm and ECG confirms irregular QRS complexes without p-waves. What factors should be including when assessing his risk for stroke and when considering anticoagulation?

	Family history of ischaemic heart disease
	Smoking history
	History of hypertension
	Sex
	History of high cholesterol

Dashboard

Overall score: 0%

1 -

Question 173 of 193

□ □

A 63-year-old gentleman is reviewed by his GP. He has a past medical history of ischaemic heart disease having suffered a myocardial infarction two years ago, hypertension, elevated cholesterol. He is a current smoker with a 25 pack-year history. He has been having no problems at home and has been looking forward to retiring from his job in the insurance industry. He lives at home with his wife. He has two children; one suffers from hypothyroidism but otherwise, they are well. His father died of a heart attack at the age of 55 years. He came in for a medication review. He takes aspirin, ramipril, atorvastatin and amlodipine. He has no problems with his medications.

On examination, he is found to have an irregularly irregular rhythm and ECG confirms irregular QRS complexes without p-waves. What factors should be including when assessing his risk for stroke and when considering anticoagulation?

	Family history of ischaemic heart disease
	Smoking history
	History of hypertension
	Sex
	History of high cholesterol

Dashboard

Overall score: **0%**

1 -

Question 174 of 193

□ □

A 68 year old gentleman with a past medical history of type 2 diabetes mellitus and hypertension attends the Emergency Department complaining of general malaise and feeling unwell. He had undergone successful primary coronary intervention (PCI) post myocardial infarction 5 weeks previously. He has a temperature of 38.2 degrees Celsius, blood pressure 164/87 mmHg and the doctor notes a lacy reticular rash extending over his legs.

Hb	12.2g/dl
Eosinophils	$1.2 \times 10^9/l$
WBC	$14.5 \times 10^9/l$
Urea	8mmol/l
Creatinine	142 μ mol/l

What is the most likely cause of his symptoms?

	Allergic rash to contrast
	Infected femoral site
	Cholesterol embolus
	Infective endocarditis
	Polyarteritis nodosa

Dashboard

Overall score: 0%

1 -

□ Question 174 of 193

□ □

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What is the most likely cause of his symptoms?

	Allergic rash to contrast
	Infected femoral site
	Cholesterol embolus
	Infective endocarditis
	Polyarteritis nodosa

Dashboard

Overall score: **0%****1** -

Question 175 of 193

A 36-year-old man presents to the Emergency Department with chest pain. This started around 2 hours ago and is described as severe. The pain is central, with no radiation. It is not worse on deep inspiration.

He smokes 10 cigarettes/day but is otherwise fit and well. His father had a myocardial infarction at the age of 61 years. Examination of the cardiovascular system is unremarkable with a blood pressure of 136/84 mmHg, pulse 96/min, respiratory rate 14/min and saturations 98% on room air.

An ECG is taken:



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What is the most likely diagnosis?

	Pulmonary embolism
	Anterior myocardial infarction
	Acute pericarditis
	Hypertrophic obstructive cardiomyopathy
	Brugada syndrome

Overall score: **0%**

1 -

Question 175 of 193



A 36-year-old man presents to the Emergency Department with chest pain. This started around 2 hours ago and is described as severe. The pain is central, with no radiation. It is not worse on deep inspiration.

He smokes 10 cigarettes/day but is otherwise fit and well. His father had a myocardial infarction at the age of 61 years. Examination of the cardiovascular system is unremarkable with a blood pressure of 136/84 mmHg, pulse 96/min, respiratory rate 14/min and saturations 98% on room air.

An ECG is taken:



© Image used on license from Dr Smith, University of Minnesota



What is the most likely diagnosis?

	Pulmonary embolism
	Anterior myocardial infarction
	Acute pericarditis
	Hypertrophic obstructive cardiomyopathy
	Brugada syndrome

Dashboard

Overall score: **0%**

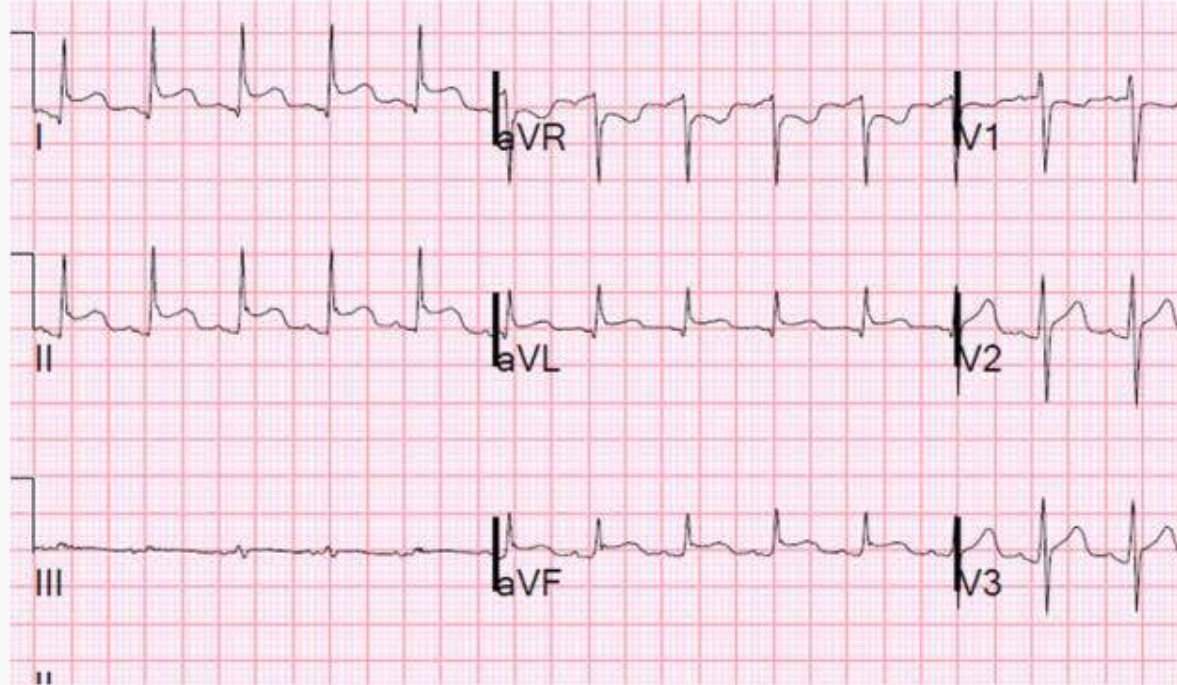
1 -

Question 175 of 193

A 36-year-old man presents with chest pain described as severe. The patient is tachypnoeic.

He smokes 10 cigarettes/day. On examination of the cardiovascular system, the heart rate is 110/min and the respiratory rate 14/min and oxygen saturation 92% on room air.

An ECG is taken:



© Image used on license from Dr Smith, University of Minnesota



What is the most likely diagnosis?

<input type="radio"/>	Pulmonary embolism
<input type="radio"/>	Anterior myocardial infarction
<input checked="" type="radio"/>	Acute pericarditis
<input type="radio"/>	Hypertrophic obstructive cardiomyopathy
<input type="radio"/>	Brugada syndrome

Dashboard

Overall score: **0%**

1 -

□ Question 176 of 193

□ □

A 72-year-old man attends cardiology clinic for routine follow-up of ischaemic heart disease. The patient had suffered a non-ST elevation myocardial infarction the previous year treated with a drug eluting stent (see below angiogram report). The patient reported being generally well over previous months although did experience retro-sternal chest pain on exertion, typically on walking up hills or climbing stairs. The patient denied any episodes of pain at rest and did not feel his symptoms were worsening. The patients regular medications were aspirin 75 mg daily, clopidogrel 75 mg daily, atorvastatin 80 mg daily and ramipril 5 mg daily. As required medications were sildenafil and a nitrate spray (which he reported as giving effective relief from his chest pain episodes).

Clinical examination did not demonstrate any evidence of cardiac failure. Blood pressure in clinic was 125 / 75 mmHg.

Results of investigations conducted 1 year previously following presentation with NSTEMI are included below.

Angiography: 90 % stenosis to left anterior descending artery treated with drug-eluting stent; 60 % stenosis to mid-right coronary artery; minor disease to other vessels.

Transthoracic echocardiogram: valvular function unremarkable; mild hypokinesis to anterior myocardium; overall ejection fraction approximately 40-45 %.

Electrocardiogram: sinus rhythm at 75 beats per minute; normal axis; normal QRS; no significant ST changes; inverted T waves in V3-V5.

What is most appropriate next line therapy for the patients chest pain?

	Amlodipine
	Bisoprolol
	Percutaneous coronary intervention
	Long-acting isosorbide mononitrate
	Nicorandil

Overall score: **0%**

1 -

□ Question 176 of 193

□ □

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	Amlodipine
	Bisoprolol
	Percutaneous coronary intervention
	Long-acting isosorbide mononitrate
	Nicorandil

Dashboard

Overall score: **0%**

1 -

□ Question 177 of 193



A 58-year-old man attends cardiology clinic with retro-sternal chest pain on exertion. He reports onset of his symptoms when walking more than 50 metres on flat ground or when playing on the floor with his grand-children. The symptoms have been present at the current level for at least the previous 9 months and the patient denied any episodes of pain at rest. The patients GP has previously attempted treatment with bisoprolol and amlodipine but both medications were discontinued for unwanted effects (bradycardia and ankle swelling respectively). The patient has no other medical history except for hypercholesterolaemia. Regular medications are aspirin 75 mg daily and pravastatin 10 mg daily with nitrate spray and sildenafil used as required. He is formerly a heavy smoker but managed to quit the previous year.

Clinical examination in clinic is unremarkable with no evidence of cardiac failure. Blood pressure in clinic is 102 / 72 mmHg.

Please see below for results of previous investigations.

Electrocardiogram: sinus rhythm at 58 beats per minute; borderline left axis deviation; normal QRS complex; non-specific lateral ST segment abnormalities; normal T waves.

Transthoracic echocardiogram: normal valvular function; no regional wall motion abnormality; ejection fraction 55-60 %.

Urea	6.7 mmol / L
Creatinine	80 micromol / L
Sodium	138 mmol / L
Potassium	4.1 mmol / L

Cardiac stress magnetic resonance imaging: significant evidence of ischaemia in the region of the lateral left ventricle; estimated 20 % of LV myocardium with significant evidence of ischaemia.

What is the most appropriate management of the patients chest pain?

	Ticagrelor
	Nicorandil

	Percutaneous coronary intervention
	Ivabradine
	Long-acting isosorbide mononitrate

Dashboard

Overall score: **0%**
1 -

□ Question 177 of 193



A 58-year-old man attends cardiology clinic with retro-sternal chest pain on exertion. He reports onset of his symptoms when walking more than 50 metres on flat ground or when playing on the floor with his grand-children. The symptoms have been present at the current level for at least the previous 9 months and the patient denied any episodes of pain at rest. The patients GP has previously attempted treatment with bisoprolol and amlodipine but both medications were discontinued for unwanted effects (bradycardia and ankle swelling respectively). The patient has no other medical history except for hypercholesterolaemia. Regular medications are aspirin 75 mg daily and pravastatin 10 mg daily with nitrate spray and sildenafil used as required. He is formerly a heavy smoker but managed to quit the previous year.

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What is the most appropriate management of the patients chest pain?

	Ticagrelor
	Nicorandil

	Percutaneous coronary intervention
	Ivabradine
	Long-acting isosorbide mononitrate

Dashboard

Overall score: **0%**
1 -

Question 178 of 193

□ □

A 48-year-old female presents with one day history of palpitation and shortness of breath. Her blood pressure is 150/90 mmHg, pulse is 190/min, respiratory rate is 21/min and oxygen saturation is 99% on air. ECG shows irregularly irregular rhythm and intermittent delta waves. Which of the following drug should be used to control the heart rate?

	Flecainide
	Digoxin
	Diltiazem
	Verapamil
	Adenosine

Dashboard

Overall score: 0%

1 -

Question 178 of 193

□ □

A 48-year-old female presents with one day history of palpitation and shortness of breath. Her blood pressure is 150/90 mmHg, pulse is 190/min, respiratory rate is 21/min and oxygen saturation is 99% on air. ECG shows irregularly irregular rhythm and intermittent delta waves. Which of the following drug should be used to control the heart rate?

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	Digoxin
	Diltiazem
	Verapamil
	Adenosine

Dashboard

Overall score: **0%**

1 -

Question 179 of 193

□ □

A 62-year-old gentleman presents to the emergency department with central chest pain. He describes his pain as a heavy pressure in the middle of his chest which radiates to his left arm. It has improved with the use of his GTN spray, but he did not want to use more than two puffs as he is concerned about getting a headache with its use. He has a past medical history of angina, previous myocardial infarction three years ago and he is a current smoker with a 25 pack-year history.

His ECG demonstrates ST depression in V3 to V5 of 2mm, pathological Q waves and T wave inversion. His troponin is raised at 350ng/L. He is given aspirin, clopidogrel and morphine. His pain settles and he starts to feel comfortable. He has a high GRACE (Global Registry of Acute Coronary Events) score at 122, meaning that he has a 7.9% chance of death within 6 months. Following discussion with the cardiology registrar will be scheduled for an angiogram within 12 hours. How should his acute coronary syndrome be further managed?

	Fondaparinux
	No further anticoagulants
	Unfractionated heparin
	Heparin sodium
	Heparin infusion

Dashboard

Overall score: 0%

1 -

Question 179 of 193

□ □

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	Fondaparinux
	No further anticoagulants
	Unfractionated heparin
	Heparin sodium
	Heparin infusion

Dashboard

Overall score: **0%**

1 -

Question 180 of 193

□ □

A 25-year-old man presents to the emergency department. He is concerned as he developed chest pain whilst at work. He noticed severe sharp chest pain which came on whilst standing and serving customers in the store where he works. He is normally fit and well with no past medical history or regular medications. He has a family history of asthma and diabetes. He describes that the pain started six hours ago and has not settled. It improved slightly with analgesia.

On examination the patient is sitting up in his bed, leaning forward. He prefers this position as it eases his chest pain. On auscultation the heart sounds are normal. The lung bases are clear and the abdomen is soft and non-tender. His vital parameters are within normal range. Troponin is found to be normal. ECG shows sinus rhythm with no other abnormalities.

What investigation is likely to be diagnostic?

	Chest X-ray
	Angiogram
	CT pulmonary angiogram
	Echocardiogram
	Full blood count

Dashboard

Overall score: 0%

1 -

Question 180 of 193

□ □

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What investigation is likely to be diagnostic?

	Chest X-ray
	Angiogram
	CT pulmonary angiogram
	Echocardiogram
	Full blood count

Dashboard

Overall score: **0%**

1 -

Question 181 of 193

□ □

A 25-year-old male presents to the emergency department with palpitations. His observations are performed, heart rate 180/min, blood pressure 134/78 mmHg, respiratory rate 16/min. His past medical history includes asthma for which he takes salbutamol PRN and fluticasone BD. Examination reveals a clear chest. Heard sounds are too rapid to distinguish S1 and S2. ECG reveals a narrow complex tachycardia, consistent with supraventricular tachycardia (SVT). Multiple attempts at vagal manoeuvres have failed to cardiovert the patient. He remains symptomatic.

Bloods are taken:

Hb	135 g/l
Platelets	344 * 10 ⁹ /l
WBC	10.1 * 10 ⁹ /l

Na ⁺	141 mmol/l
K ⁺	4.2 mmol/l
Creatinine	65 µmol/l
CRP	2 mg/l

Arterial blood gases on room air:

pO ₂	12.1 kPa
PCO ₂	4.1 kPa
pH	7.39
Base excess	-0.2

Chest X-ray: No abnormality detected

Which pharmacological agent would be most appropriate for cardioverting this man?

	Verapamil
	Adenosine
	Digoxin
	Amiodarone
	Bisoprolol

Dashboard

Overall score: **0%**

1 -

Question 181 of 193

□ □

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	Adenosine
	Digoxin
	Amiodarone
	Bisoprolol

Dashboard

Overall score: **0%**
1 -

Question 182 of 193

□ □

A 28-year-old woman is referred by her GP with refractory hypertension. Despite combination therapy with ramipril, amlodipine, bendroflumethiazide and atenolol, her blood pressure in clinic today is 181/105 mmHg. Some of her bloods are shown below. On direct questioning she also admits passing urine more than 10 times per day. What is the most likely diagnosis?

Na ⁺	145 mmol/l
K ⁺	3.0 mmol/l
Urea	6.0 mmol/l
Creatinine	71 µmol/l

What is the most likely diagnosis?

	Phaeochromocytoma
	Coarctation of the aorta
	Renal artery stenosis
	21-hydroxylase deficiency
	Conn's syndrome

Dashboard

Overall score: 0%

1 -

□ Question 182 of 193

□ □

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Dashboard

Overall score: **0%****1** -

□ Question 182 of 193

□ □

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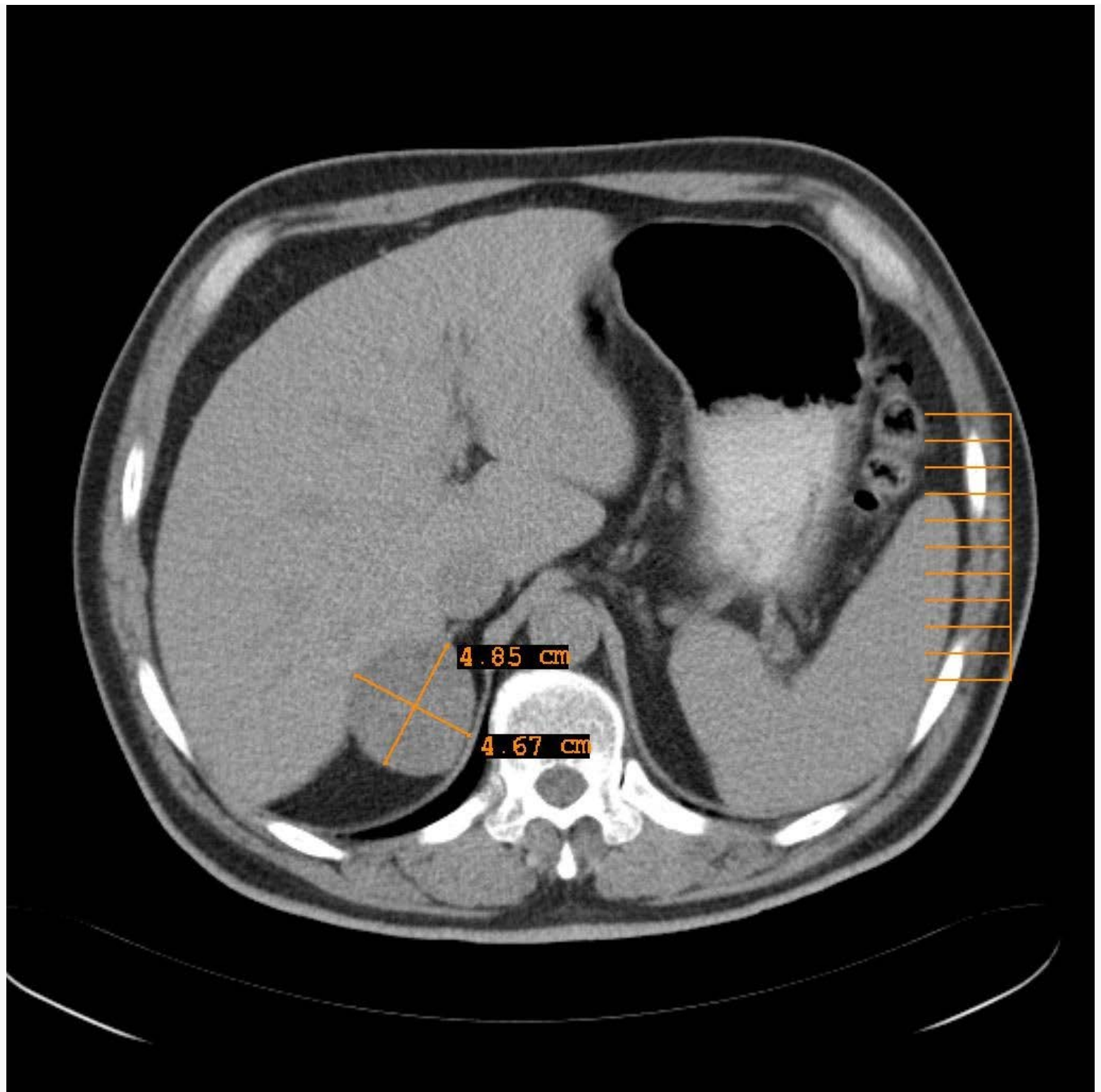
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	Phaeochromocytoma
	Coarctation of the aorta
	Renal artery stenosis
	21-hydroxylase deficiency
	Conn's syndrome

Dashboard

Overall score: 0%

1 -



Question 183 of 193



A 54-year-old male previously treated for lymphoma is seen in clinic with a 6-month history of exertional dyspnoea which is progressive. He was treated four years ago and was told that there was no evidence of disease on the final CT scan. His GP treated him for a presumed lower respiratory tract infection two weeks ago. He returned from a business trip to Thailand six months ago, during which he consumed more alcohol than he usually does. He takes no medications and is otherwise fit and well, and is a non-smoker. On examination there is mild pedal oedema, his chest is clear and jugular venous pressure(JVP) is raised on inspiration. Auscultation of his heart reveals an extra heart sound very soon after S2.

What is the likely cause of his symptoms?

	Superior vena cava obstruction
	Cardiac tamponade
	Left ventricular failure
	Chronic obstructive pulmonary disease
	Constrictive pericarditis

Dashboard

Overall score: 0%

1 -

Question 183 of 193



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What is the likely cause of his symptoms?

	Superior vena cava obstruction
	Cardiac tamponade
	Left ventricular failure
	Chronic obstructive pulmonary disease
	Constrictive pericarditis

Dashboard

Overall score: 0%

1 -

□ Question 184 of 193

□ □

A 52-year-old gentleman works as a lorry driver. His past medical history includes hypertension and raised BMI. He is admitted to the Emergency Department with chest pain. An ECG confirms ST depression in V1 to V4, with no pathological Q waves. Subsequent blood tests reveal a troponin of 10,000 consistent with a non-ST-elevation myocardial infarction (NSTEMI). He is commenced on appropriate secondary prevention, including aspirin 75mg OD, clopidogrel 75mg OD and fondaparinux 2.5mg SC. The patient is transferred to the cardiology unit and awaits in-patient angiography.

You are asked to review him urgently as he describes acute breathlessness. He denies chest pain. Observations are as follows: heart rate 130 beats per minute, blood pressure 95/62 mmHg, temperature 36.1°C, respiratory rate 28/min, saturations 94% on 10 litres oxygen. On examination, heart sounds are normal with no added sounds. JVP is mildly elevated. There is no evidence of ascites or peripheral oedema. A repeat ECG confirms sinus tachycardia (heart rate 130bpm) but no dynamic changes. A portable chest x-ray reveals cardiomegaly with upper lobe diversion and peri-hilar shadowing. An urgent bedside echocardiogram demonstrates significant LV systolic dysfunction with a 2cm of pericardial effusion but no features of tamponade.

What is the single next best management step?

	Continuous positive airway pressure (CPAP)
	Ultrasound-guided pericardiocentesis
	Urgent angiography
	IV fluids
	Inotrope and IV diuretic

Dashboard

Overall score: 0%

1 -

Question 184 of 193

□ □

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What is the single next best management step?

	Continuous positive airway pressure (CPAP)
	Ultrasound-guided pericardiocentesis
	Urgent angiography
	IV fluids
	Inotrope and IV diuretic

Dashboard

Overall score: 0%

1 -

Question 185 of 193

A 25-year-old woman has recently been diagnosed with Marfan's syndrome. She has no other known diagnosis. She undergoes an echocardiogram which demonstrates severe aortic regurgitation, significant aortic root dilatation and a left ventricular ejection fraction of 70%. She is asymptomatic and has no family history of aortic dissection. What is the most appropriate management of her cardiac problem?

	Follow-up in six months
	ACE inhibitor
	Exercise testing
	Offer surgery if planning to become pregnant
	Referral for aortic valve replacement

Dashboard

Overall score: **0%**

1 -

Question 185 of 193

□ □

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	Follow-up in six months
	ACE inhibitor
	Exercise testing
	Offer surgery if planning to become pregnant
	Referral for aortic valve replacement

Dashboard

Overall score: **0%**

1 -

□ Question 186 of 193



A 23-year-old Afro-Caribbean female presents with a four-month history of fatigue, transient fever lasting hours, 12kg weight loss and non-specific bilateral headaches. She has presented to the Emergency Department four times in the past 3 months with non-specific abdominal pains that are worse after eating and also blue-lighted into her local hyperacute stroke unit as a thrombolysis patient after sudden onset loss of monocular blindness in her left eye, which resolved before any treatment was given. She has no other past medical history, does not smoke and drinks minimally.

On examination, cranial nerve examination and fundoscopy are both unremarkable. Upper and lower limb neurology are intact with downgoing plantars. Her heart sounds demonstrates a gallop rhythm, an early diastolic murmur and a mild radial-radial delay. Chest auscultation is clear. She appears very warm and measures 38.4°C in your clinic with facial flushing. Blood tests are as follows:

Hb	94 g/l
Platelets	245 * 10 ⁹ /l
WBC	18.4 * 10 ⁹ /l
Eosinophil	0.1 * 10 ⁹ /l
ESR	121 mm/hr

Na ⁺	141 mmol/l
K ⁺	4.0 mmol/l
Urea	5.2 mmol/l
Creatinine	68 µmol/l
CRP	56 mg/l

Complement levels were reported as normal and an antibody screen including ANCA and ANA was negative. Urine dip is negative. Chest X-ray demonstrates focal consolidation. Her heart rate is 95 and regular, her blood pressure is 185/110 mmHg.

What is the unifying diagnosis?

	Systemic lupus erythematosus
	Polyarteritis nodosa
	Poorly controlled primary hypertension
	Ascending aortic aneurysm
	Takayasu arteritis

Dashboard

Overall score: 0%

1 -

□ Question 186 of 193



A 23-year-old Afro-Caribbean female presents with a four-month history of fatigue, transient fever lasting hours, 12kg weight loss and non-specific bilateral headaches. She has presented to the Emergency Department four times in the past 3 months with non-specific abdominal pains that are worse after eating and also blue-lighted into her local hyperacute stroke unit as a thrombolysis patient after sudden onset loss of monocular blindness in her left eye, which resolved before any treatment was given. She has no other past medical history, does not smoke and drinks minimally.

On examination, cranial nerve examination and fundoscopy are both unremarkable. Upper and lower limb neurology are intact with downgoing plantars. Her heart sounds demonstrates a gallop rhythm, an early diastolic murmur and a mild radial-radial delay. Chest auscultation is clear. She appears very warm and measures 38.4°C in your clinic with facial flushing. Blood tests are as follows:

Hb	94 g/l
Platelets	245 * 10 ⁹ /l
WBC	18.4 * 10 ⁹ /l
Eosinophil	0.1 * 10 ⁹ /l
ESR	121 mm/hr

Na ⁺	141 mmol/l
K ⁺	4.0 mmol/l
Urea	5.2 mmol/l
Creatinine	68 µmol/l
CRP	56 mg/l

Complement levels were reported as normal and an antibody screen including ANCA and ANA was negative. Urine dip is negative. Chest X-ray demonstrates focal consolidation. Her heart rate is 95 and regular, her blood pressure is 185/110 mmHg.

What is the unifying diagnosis?

	Systemic lupus erythematosus
	Polyarteritis nodosa
	Poorly controlled primary hypertension
	Ascending aortic aneurysm
	Takayasu arteritis

Dashboard

Overall score: 0%

1 -

Question 186 of 193

A 23-year-old Afro-Caribbean female presents with a four-month history of specific bilateral headaches. She has presented to the Emergency Department with episodes of blue-lighting and also blue-lighted into her local hypotension. She has experienced monocular blindness in her left eye, which resolved before any treatment. She drinks minimally.

On examination, cranial nerve examination and fundoscopy are both normal. She has tender, red, swollen plantars. Her heart sounds demonstrate a gallop rhythm, an early diastolic murmur. She appears very warm and measures 38.4°C in your clinic with fever.

Hb	94 g/l
Platelets	245 * 10 ⁹ /l
WBC	18.4 * 10 ⁹ /l
Eosinophil	0.1 * 10 ⁹ /l
ESR	121 mm/hr

Na ⁺	141 mmol/l
K ⁺	4.0 mmol/l
Urea	5.2 mmol/l
Creatinine	68 µmol/l
CRP	56 mg/l

Complement levels were reported as normal and an antibody screen including ANCA and ANA was negative. Urine dip is negative. Chest X-ray demonstrates focal consolidation. Her heart rate is 95 and regular, her blood pressure is 185/110 mmHg.

What is the unifying diagnosis?

<input type="checkbox"/>	Systemic lupus erythematosus
<input type="checkbox"/>	Polyarteritis nodosa
<input type="checkbox"/>	Poorly controlled primary hypertension
<input type="checkbox"/>	Ascending aortic aneurysm
<input checked="" type="checkbox"/>	Takayasu arteritis



Overall score: **0%**

1 -

Question 187 of 193

□ □

A 56-year-old gentleman is admitted to Emergency Department with back pain. His past medical history included type 2 diabetes and hypertension. Initial observations are as follows: heart rate 112 beats per minute, blood pressure 155/82 mmHg, respiratory rate 26/min, oxygen saturations 95% on 2 litres oxygen via nasal cannula, temperature 37.2°C.

Examination demonstrates muffled heart sounds I and II. JVP is not elevated and there is no peripheral oedema. Auscultation of the chest is clear with no crackles or wheeze and good air entry bilaterally. An ECG confirms sinus tachycardia with a heart rate of 102 beats per minute and 2mm inferior ST depression. Portable chest x-ray shows poor inspiratory effort with cardiomegaly and clear lung fields.

What single investigation would you arrange next?

	CT aortogram
	CT pulmonary angiogram (CTPA)
	Ventilation/Perfusion scan (V/Q scan)
	Echocardiogram
	12 hour troponin

Dashboard

Overall score: 0%

1 -

Question 187 of 193

□ □

A 56-year-old gentleman is admitted to Emergency Department with back pain. His past medical history included type 2 diabetes and hypertension. Initial observations are as follows: heart rate 112 beats per minute, blood pressure 155/82 mmHg, respiratory rate 26/min, oxygen saturations 95% on 2 litres oxygen via nasal cannula, temperature 37.2°C.

Examination demonstrates muffled heart sounds I and II. JVP is not elevated and there is no peripheral oedema. Auscultation of the chest is clear with no crackles or wheeze and good air entry bilaterally. An ECG confirms sinus tachycardia with a heart rate of 102 beats per minute and 2mm inferior ST depression. Portable chest x-ray shows poor inspiratory effort with cardiomegaly and clear lung fields.

What single investigation would you arrange next?

	CT aortogram
	CT pulmonary angiogram (CTPA)
	Ventilation/Perfusion scan (V/Q scan)
	Echocardiogram
	12 hour troponin

Dashboard

Overall score: **0%**

1 -

Question 188 of 193

□ □

A 32 year old woman presents to the emergency department with palpitations. Her past medical history includes type 2 diabetes mellitus and acne vulgaris. She is currently taking Yasmin (a combined oral contraceptive pill) and has no known allergies.

Examination reveals a strong radial pulse, which is tachycardic and regular. She has a raised body mass index. Her cardiopulmonary system is unremarkable.

Observations:

- Heart rate: 168/min
- Blood pressure: 138/88 mmHg
- Oxygen saturations: 98% on room air
- Temperature: 37°C






























An ECG shows a supraventricular tachycardia.

The foundation year two doctor has already tried vagal maneuvers and has just given 6mg of adenosine to no effect.

What is the most appropriate next step in management?

	Amiodarone IV infusion
	12mg adenosine IV
	Beta blocker IV
	Cardioversion
	Further 6mg adenosine IV

Overall score: 14.4%

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Question 188 of 193

□ □

A 32 year old woman presents to the emergency department with palpitations. Her past medical history includes type 2 diabetes mellitus and acne vulgaris. She is currently taking Yasmin (a combined oral contraceptive pill) and has no known allergies.

Examination reveals a strong radial pulse, which is tachycardic and regular. She has a raised body mass index. Her cardiopulmonary system is unremarkable.

Observations:

- Heart rate: 168/min
- Blood pressure: 138/88 mmHg
- Oxygen saturations: 98% on room air
- Temperature: 37°C






























An ECG shows a supraventricular tachycardia.

The foundation year two doctor has already tried vagal maneuvers and has just given 6mg of adenosine to no effect.

What is the most appropriate next step in management?

	Amiodarone IV infusion
	12mg adenosine IV
	Beta blocker IV
	Cardioversion
	Further 6mg adenosine IV

Overall score: 14.4%

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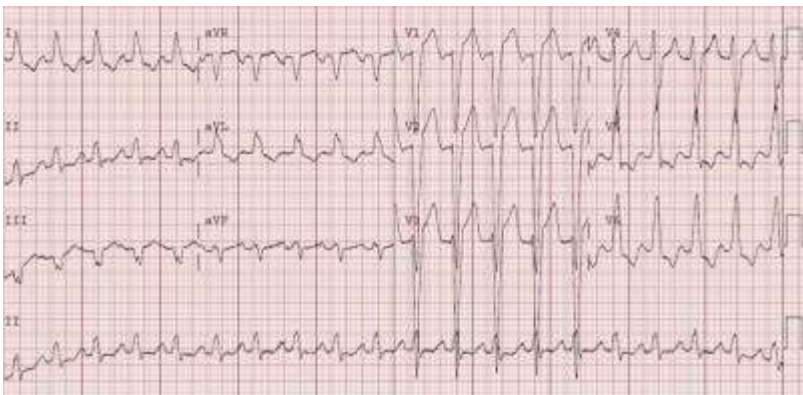
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Question 189 of 193

A 58-year-old man presents with intermittent chest pains for the past two days. Whilst you are taking the history he complains of worsening pain and you arrange an ECG immediately:



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He is tachycardic and sweaty with a blood pressure of 128/88mmHg. What does the ECG show?

	Narrow complex tachycardia with ST elevation
	Right bundle branch block with ST elevation
	Left bundle branch block with ST elevation
	Ventricular tachycardia with ST elevation
	Posterior myocardial infarction

1	✗
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9	✗
10	✗
11	✗
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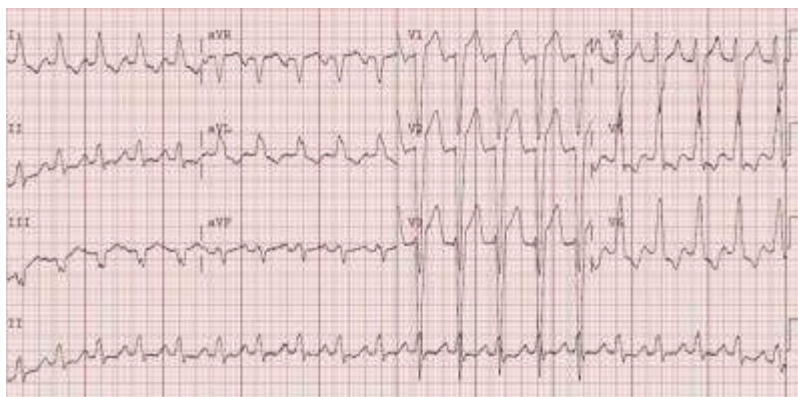
186 ✗

187 ✓

□ Question 189 of 193

□ □

A 58-year-old man presents with intermittent chest pains for the past two days. Whilst you are taking the history he complains of worsening pain and you arrange an ECG immediately:



© Image used on license from Dr Smith, University of Minnesota




He is tachycardic and sweaty with a blood pressure of 128/88mmHg. What does the ECG show?

	Narrow complex tachycardia with ST elevation
	Right bundle branch block with ST elevation
	Left bundle branch block with ST elevation
	Ventricular tachycardia with ST elevation
	Posterior myocardial infarction

Dashboard

Overall score: **14.4%**

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Question 190 of 193

□ □

A 72 year old female presents with left chest pain associated with sweating in her hands and nausea. Her past medical history includes T2 diabetes mellitus, hypertension and hypercholesterolaemia, with her regular medications including metformin 850mg BD, gliclazide 40mg OD, ramipril 10mg, amlodipine 5mg and atorvastatin 40mg ON. On examination, her heart sounds are normal with a pansystolic murmur. Her ECG demonstrates ST depression in V2 to V5. Her BMs have ranged between 6 and 14 mmol/L since her admission 4 hours ago. How should you manage her diabetic medications?

	No changes to medication
	Increase metformin to 850mg TDS
	Increase gliclazide to 40mg BD
	Actrapid PRN 4 units when BM >11mmol/L
	Stop all medications, start insulin sliding scale

Dashboard

Overall score: 14.4%

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□ Question 190 of 193

□ □

A 72 year old female presents with left chest pain associated with sweating in her hands and nausea. Her past medical history includes T2 diabetes mellitus, hypertension and hypercholesterolaemia, with her regular medications including metformin 850mg BD, gliclazide 40mg OD, ramipril 10mg, amlodipine 5mg and atorvastatin 40mg ON. On examination, her heart sounds are normal with a pansystolic murmur. Her ECG demonstrates ST depression in V2 to V5. Her BMs have ranged between 6 and 14 mmol/L since her admission 4 hours ago. How should you manage her diabetic medications?

	No changes to medication
	Increase metformin to 850mg TDS
	Increase gliclazide to 40mg BD
	Actrapid PRN 4 units when BM >11mmol/L
	Stop all medications, start insulin sliding scale

Dashboard

Overall score: 14.4%

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8 X

9 X

10 X

11 X

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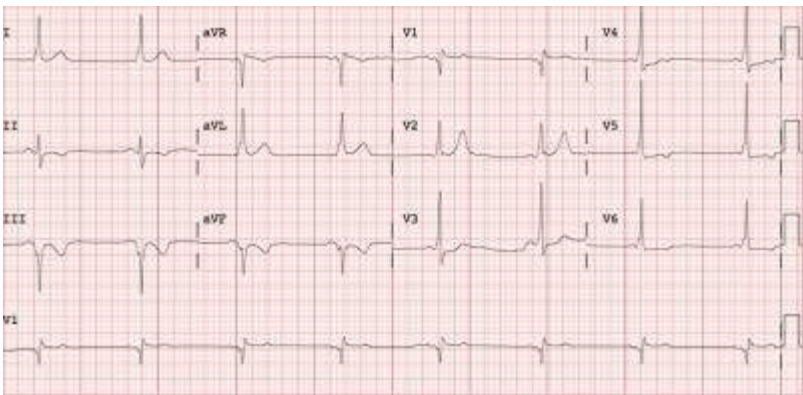
184 ✗

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186 ✗

Question 191 of 193

A 35-year-old man is investigated for recurrent palpitations associated with pre-syncopal symptoms and dyspnoea. Blood tests are unremarkable and a resting 12 lead ECG is shown below:
































© Image used on license from Dr Smith, University of Minnesota



Given the likely diagnosis it is decided that radiofrequency ablation is the most appropriate treatment. What part of the heart should be ablated?

	Sinoatrial node
	Atrioventricular node
	Junction of right atrium and right ventricle
	Left atrial appendage
	Junction of left atrium and left ventricle

Overall score: 14.4%

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X

31 X

32 X

33 X

34 X

35 X

36 X

37 X

38 X

39 X

40 ✓

41 X

42 X

43 X

44 X

45 X

46 X

47 X

48 X

49 X

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51 X

52 X

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54 X

55 X

56 X

57 X

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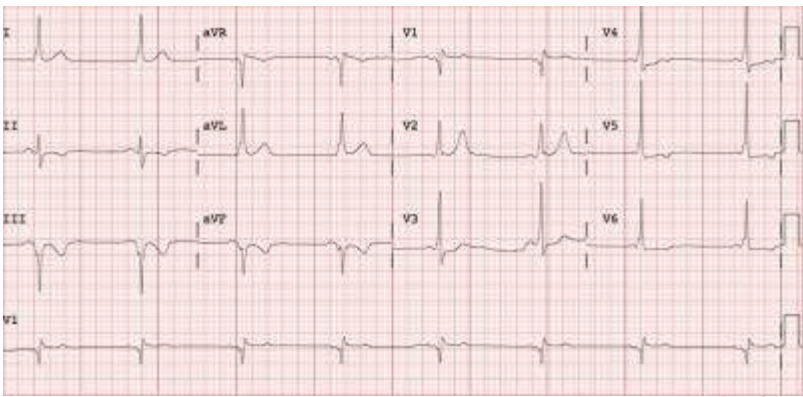
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Question 191 of 193

A 35-year-old man is investigated for recurrent palpitations associated with pre-syncopal symptoms and dyspnoea. Blood tests are unremarkable and a resting 12 lead ECG is shown below:
































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Given the likely diagnosis it is decided that radiofrequency ablation is the most appropriate treatment. What part of the heart should be ablated?

	Sinoatrial node
	Atrioventricular node
	Junction of right atrium and right ventricle
	Left atrial appendage
	Junction of left atrium and left ventricle

Overall score: 14.4%

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39 X

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41 X

42 X

43 X

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60	X
61	X
62	X
63	X
64	X
65	✓
66	X
67	X
68	X
69	✓
70	✓
71	✓
72	X
73	X
74	X
75	X
76	X
77	X
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Question 192 of 193

A 19-year-old student is brought to the Emergency Department by her friends. Around one hour ago she 'collapsed' whilst playing hockey. Her friends describe her complaining that she felt light-headed and then 'fainting' to the ground. She lost consciousness for a few seconds before returning to normal quite quickly. There is no past medical history of note other than the use of Microgynon 30 (a combined oral contraceptive pill). For the past 4-5 days the patient has experienced shortness-of-breath and a central chest pain which is worse when she coughs. On examination her pulse is 120/min, blood pressure 96/60 mmHg and chest auscultation reveals scattered wheezes. An ECG done on admission is shown below:



© Image used on license from Dr Smith, University of Minnesota



What is the most likely diagnosis?

	Hypertrophic obstructive cardiomyopathy
	Vasovagal attack
	Acute coronary syndrome
	Pulmonary embolism
	Asthma attack

Overall score: 14.4%

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|----|---|
| 1 | ✗ |
| 2 | ✗ |
| 3 | ✓ |
| 4 | ✗ |
| 5 | ✗ |
| 6 | ✗ |
| 7 | ✗ |
| 8 | ✗ |
| 9 | ✗ |
| 10 | ✗ |
| 11 | ✗ |
| 12 | ✓ |
| 13 | ✗ |
| 14 | ✗ |
| 15 | ✓ |
| 16 | ✗ |
| 17 | ✓ |
| 18 | ✗ |
| 19 | ✗ |
| 20 | ✗ |
| 21 | ✗ |
| 22 | ✗ |
| 23 | ✗ |
| 24 | ✗ |
| 25 | ✓ |
| 26 | ✗ |
| 27 | ✓ |
| 28 | ✗ |
| 29 | ✗ |

30 X
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44 X
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Question 192 of 193

A 19-year-old student is brought to the Emergency Department by her friends. Around one hour ago she 'collapsed' whilst playing hockey. Her friends describe her complaining that she felt light-headed and then 'fainting' to the ground. She lost consciousness for a few seconds before returning to normal quite quickly. There is no past medical history of note other than the use of Microgynon 30 (a combined oral contraceptive pill). For the past 4-5 days the patient has experienced shortness-of-breath and a central chest pain which is worse when she coughs. On examination her pulse is 120/min, blood pressure 96/60 mmHg and chest auscultation reveals scattered wheezes. An ECG done on admission is shown below:



What is the most likely diagnosis?

	Hypertrophic obstructive cardiomyopathy
	Vasovagal attack
	Acute coronary syndrome
	Pulmonary embolism
	Asthma attack

Overall score: 14.4%

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97 ✓
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Question 192 of 193

A 19-year-old student is brought to the Emergency Department whilst playing hockey. Her friends describe her complaining that she lost consciousness for a few seconds before returning to consciousness. She has no other note other than the use of Microgynon 30 (a combined oral contraceptive pill). She experienced shortness-of-breath and a central chest pain which resolved within 10 minutes. Her heart rate is 120/min, blood pressure 96/60 mmHg and chest auscultation is normal. The CT scan is shown below:



What is the most likely diagnosis?

	Hypertrophic obstructive cardiomyopathy
	Vasovagal attack
	Acute coronary syndrome
	Pulmonary embolism
	Asthma attack

Overall score: 14.4%

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|----|---|
| 1 |  |
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60	X
61	X
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63	X
64	X
65	✓
66	X
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71	✓
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74	X
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Question 192 of 193



A 19-year-old student is brought to the Emergency Department by her friends. Around one hour ago she 'collapsed' whilst playing hockey. Her friends describe her complaining that she felt light-headed and then 'fainting' to the ground. She lost consciousness for a few seconds before returning to normal quite quickly. There is no past medical history of note other than the use of Microgynon 30 (a combined oral contraceptive pill). For the past 4-5 days the patient has experienced shortness-of-breath and a central chest pain which is worse when she coughs. On examination her pulse is 120/min, blood pressure 96/60 mmHg and chest auscultation reveals scattered wheezes. An ECG done on admission is shown below:



© Image used on license from Dr Smith, University of Minnesota



What is the most likely diagnosis?

	Hypertrophic obstructive cardiomyopathy
	Vasovagal attack
	Acute coronary syndrome
	Pulmonary embolism
	Asthma attack

Dashboard

Overall score: 14.4%

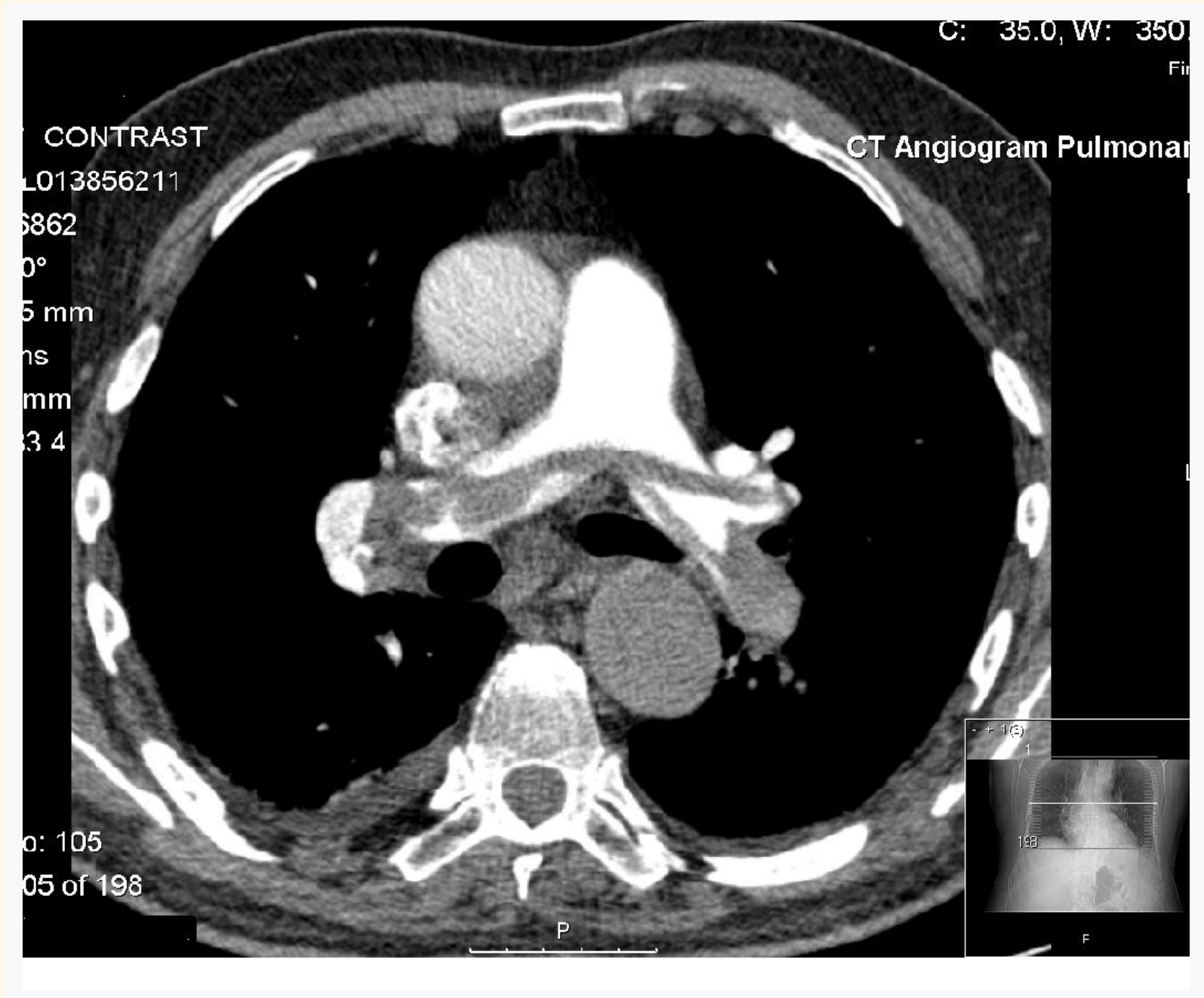
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- 61 X
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181 ✓
182 ✗
183 ✗
184 ✗
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187 ✓

Question 193 of 193

□ □

An 84-year-old presents to the emergency department with and acute deterioration in shortness of breath on a background of 9 months of progressively reduced exercise tolerance. Her past medical history includes hypertension, previous myocardial infarctions 7 months ago, chronic kidney disease and COPD. She has a 50 pack year smoking history giving up 2 years ago. Her exercise tolerance is 150 yards, limited by shortness of breath.

On examination, an ejection systolic murmur can be heard in the aortic area with bibasal crackles on chest auscultation. An admission chest x-ray is consistent with pulmonary oedema and intravenous diuresis is commenced. A transthoracic echocardiogram demonstrates ejection fraction of 33% with impaired left ventricular function, no vegetations, a bicuspid heavily calcified aortic valve with an area of 0.7cm² and a peak gradient of 32mmHg. Angiography demonstrates non-flow limiting stenosis of 65% in the left anterior descending artery but no lesions requiring revascularisation. Lung function testing following successful diuresis reveals forced vital capacity at 55% of predicted and forced expiratory volume in 1 second at 48% of predicted.

The patient is keen for a definitive intervention if appropriate. What is the appropriate next action?

	No action
	Balloon aortic valvuloplasty
	Aortic valve replacement
	Transcatheter aortic valve implantation
	Coronary artery bypass graft and aortic valve replacement

Dashboard

Overall score: 14.4%

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3	✓
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27	✓
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48 X
49 X
50 X
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157 ✓

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□ Question 193 of 193



An 84-year-old presents to the emergency department with an acute deterioration in shortness of breath on a background of 9 months of progressively reduced exercise tolerance. Her past medical history includes hypertension, previous myocardial infarctions 7 months ago, chronic kidney disease and COPD. She has a 50 pack year smoking history giving up 2 years ago. Her exercise tolerance is 150 yards, limited by shortness of breath.

On examination, an ejection systolic murmur can be heard in the aortic area with bibasal crackles on chest auscultation. An admission chest x-ray is consistent with pulmonary oedema and intravenous diuresis is commenced. A transthoracic echocardiogram demonstrates ejection fraction of 33% with impaired left ventricular function, no vegetations, a bicuspid heavily calcified aortic valve with an area of 0.7cm² and a peak gradient of 32mmHg. Angiography demonstrates non-flow limiting stenosis of 65% in the left anterior descending artery but no lesions requiring revascularisation. Lung function testing following successful diuresis reveals forced vital capacity at 55% of predicted and forced expiratory volume in 1 second at 48% of predicted.

The patient is keen for a definitive intervention if appropriate. What is the appropriate next action?

	No action
	Balloon aortic valvuloplasty
	Aortic valve replacement
	Transcatheter aortic valve implantation
	Coronary artery bypass graft and aortic valve replacement

Dashboard

Overall score: 14.4%

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3	✓
4	✗
5	✗
6	✗
7	✗
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Question 1 of 215



A 31-year-old lady presents to the emergency department with abdominal pain.

Her medical and surgical history is unremarkable other than mild depression and hay fever. Medications include paroxetine and PRN loratadine.

She complains of generalised colicky abdominal pain and has vomited once in the department.

On examination blood pressure is 155/86mmHg, heart rate is 95bpm and temperature is 37.9°C. Digital rectal examination reveals hard stool in the rectum.

Investigations reveal:

Hb	131 g/l
Platelets	362 * 10 ⁹ /l
WBC	7.3 * 10 ⁹ /l
Na ⁺	121 mmol/l
K ⁺	3.3 mmol/l
Urea	6.2 mmol/l
Creatinine	87 µmol/l
Urine dipstick	protein ++, leucocytes ++

What is the most likely diagnosis?

	Cholecystitis
	Acute porphyria
	Intestinal obstruction

	Pyelonephritis
	Systemic lupus erythematosus

Dashboard

Overall score: **0%**

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Question 1 of 215



A 31-year-old lady presents to the emergency department with abdominal pain.

Her medical and surgical history is unremarkable other than mild depression and hay fever. Medications include paroxetine and PRN loratadine.

She complains of generalised colicky abdominal pain and has vomited once in the department.

On examination blood pressure is 155/86mmHg, heart rate is 95bpm and temperature is 37.9°C. Digital rectal examination reveals hard stool in the rectum.

Investigations reveal:

Hb	131 g/l
Platelets	362 * 10 ⁹ /l
WBC	7.3 * 10 ⁹ /l
Na ⁺	121 mmol/l
K ⁺	3.3 mmol/l
Urea	6.2 mmol/l
Creatinine	87 µmol/l
Urine dipstick	protein ++, leucocytes ++

What is the most likely diagnosis?

	Cholecystitis
	Acute porphyria
	Intestinal obstruction

	Pyelonephritis
	Systemic lupus erythematosus

Dashboard

Overall score: **0%**
1 -

□ Question 1 of 215

□ □

A 31-year-old lady presents to the emergency department with abdominal pain.

Her medical and surgical history is unremarkable other than mild depression and hay fever. Medications include paroxetine and PRN loratadine.

She complains of generalised colicky abdominal pain and has vomited once in the department.

On examination blood pressure is 155/86mmHg, heart rate is 95bpm and temperature is 37.9°C. Digital rectal examination reveals hard stool in the rectum.

Investigations reveal:

Hb	131 g/l
Platelets	$362 \times 10^9/l$
WBC	$7.3 \times 10^9/l$
Na ⁺	121 mmol/l
K ⁺	3.3 mmol/l
Urea	6.2 mmol/l
Creatinine	87 μ mol/l
Urine dipstick	protein ++, leucocytes ++

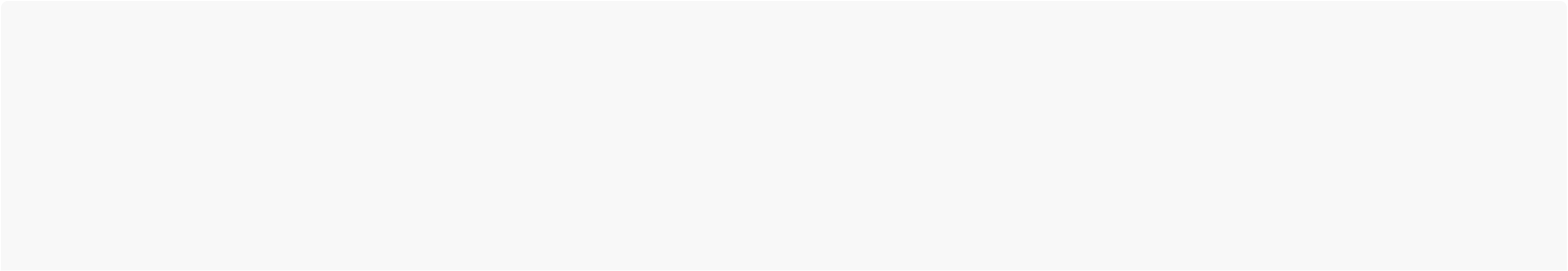
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	Cholecystitis
	Acute porphyria
	Intestinal obstruction

	Pyelonephritis
	Systemic lupus erythematosus

Dashboard

Overall score: **0%**
1 -



Mitochondria

Cytosol

Glycine + succinyl-CoA

Sideroblastic anemia

ALA synthase

δ -aminolevulinic acid

Lead poisoning

ALA dehydratase

Porphobilinogen

Porphobilinogen deaminase

AIP

Hydroxymethylbilane

Uroporphyrinogen III

Uroporphyrinogen decarboxylase

PCT

Coproporphyrinogen III

Protoporphyrin

Fe^{2+}

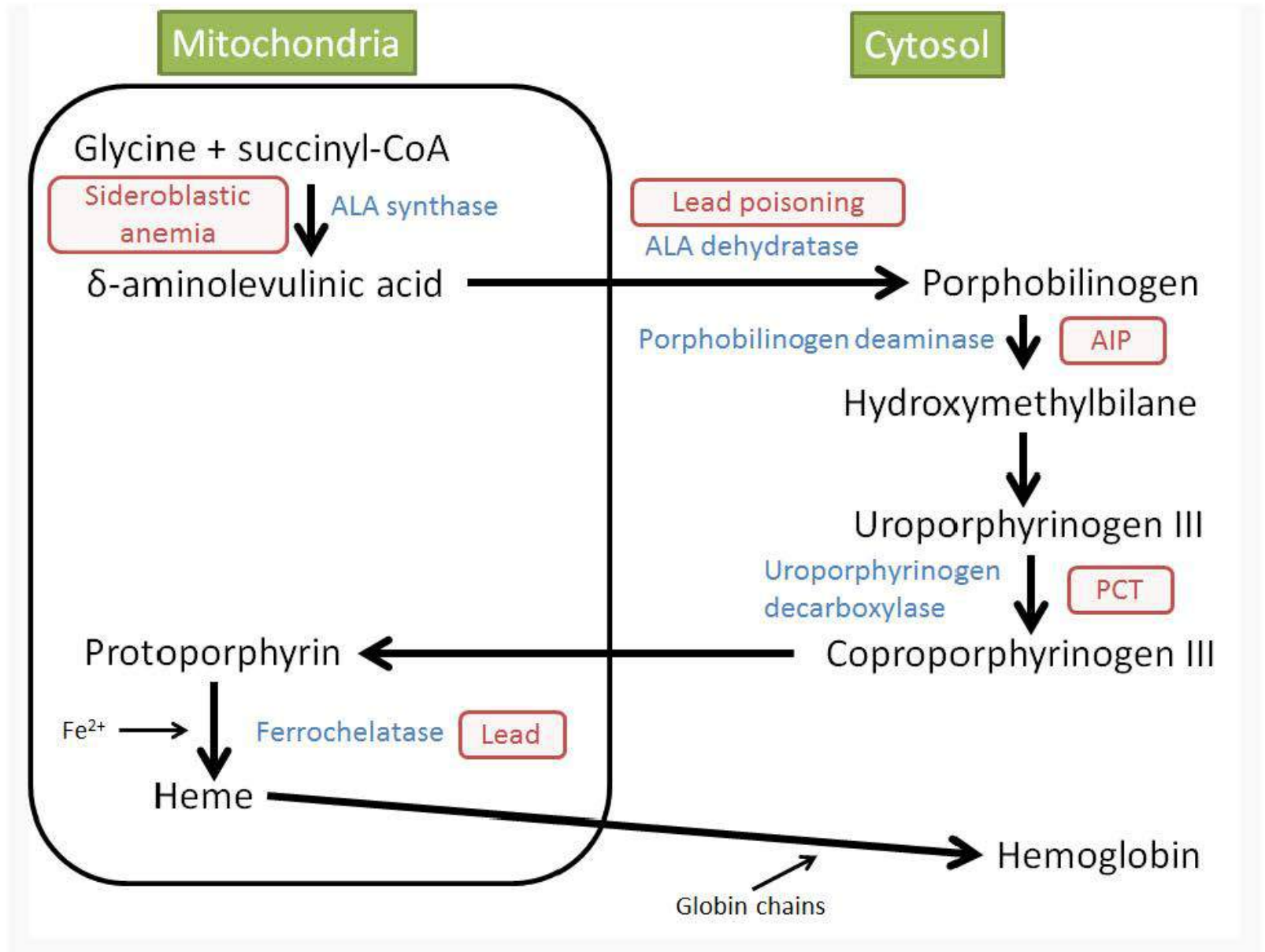
Ferrochelatase

Lead

Heme

Hemoglobin

Globin chains



□ Question 2 of 215

□ □

A 19-year-old man is reviewed prior to discharge. He presented with vomiting and abdominal pain and was found to have diabetic ketoacidosis. He was managed as an inpatient for five days before being well enough for discharge. He is also diagnosed with type 1 diabetes mellitus on this admission as a cause of the diabetic ketoacidosis. He has been educated by the diabetic nurse on how to manage his diabetes and insulin at home, but he is concerned about what his target plasma glucose should be after eating.

What is the recommended target after eating to be achieved by home monitoring?

	3-6mmol/litre
	5-10mmol/litre
	5-9mmol/litre
	7-12mmol/litre
	2-9 mmol/litre

Dashboard

Overall score: 0%

1 -

□ Question 2 of 215

□ □

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	5-10mmol/litre
	5-9mmol/litre
	7-12mmol/litre
	2-9 mmol/litre

Dashboard

Overall score: **0%****1** -

Question 3 of 215

□ □

A 29-year-old woman presentsis referred to the Endocrinology clinic as she has just found out she is pregnant. She was diagnosed with hypothyroidism three years ago and is currently stable on a dose of levothyroxine 75mcg od. She has also been taking folic acid 400mcg od for the past 6 months. Her last bloods taken 6 months ago show the following:

TSH	1.4 mU/l
-----	----------

You request a repeat TSH and free T4 measurement. What is the most appropriate next step?

	Decrease levothyroxine to 50mcg od
	Keep levothyroxine at 75mcg od
	Increase levothyroxine to 100mcg od
	Keep levothyroxine at 75mcg od + increase folic acid to 5mg od
	Stop levothyroxine until TSH known

Dashboard

Overall score: 0%

1 -

□ Question 3 of 215

□ □

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	Stop levothyroxine until TSH known

Dashboard

Overall score: **0%****1** -

□ Question 4 of 215

□ □

A 17 year old girl is brought into A&E by her mother. The patient appears terrified after she experienced an episode on waking earlier in the morning when she could not move at all for 2 hours. This was her second episode. She reports no loss of consciousness and was aware throughout the episode. She has no other past medical history documented. She is not aware of a previous episode of epilepsy. On examination, her heart sounds and breath sounds are unremarkable. Neurological examination demonstrated no abnormalities. She normal dentition and her BMI is 19.5. A 12 lead ECG demonstrated a jerky baseline with flat T waves. What is the diagnosis?

	Partial or absence seizures
	Guillain Barre syndrome
	Botulinum toxicity
	Myasthenia gravis
	Hypokalaemia

Dashboard

Overall score: 0%

1 -

□ Question 4 of 215

□ □

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	Guillain Barre syndrome
	Botulinum toxicity
	Myasthenia gravis
	Hypokalaemia

Dashboard

Overall score: **0%****1** -

□ Question 5 of 215

□ □

A 56-year-old lady presents with a 3 month history of abdominal pains, low mood and constipation. Past medical history includes hypertension and depression following the death of her husband 2 years ago. Routine blood tests are performed by the GP and upon review the patient is referred into hospital.

Blood tests are as below:

Hb	100 g/l	Na ⁺	135 mmol/l
Platelets	230 * 10 ⁹ /l	K ⁺	4.7 mmol/l
WBC	10 * 10 ⁹ /l	Urea	6 mmol/l
Calcium (adjusted)	2.96 mmol/l	Creatinine	110 µmol/l
Phosphate	1.35 mmol/l	CRP	30 mg/l
Albumin	35 g/L		

Which diagnostic test should be performed first?

	Parathyroid hormone level
	Myeloma screen
	CT chest, abdomen and pelvis
	Urinary calcium levels
	Skeletal X-ray

□ Question 5 of 215

□ □

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Albumin	35 g/L		

Which diagnostic test should be performed first?

	Parathyroid hormone level
	Myeloma screen
	CT chest, abdomen and pelvis
	Urinary calcium levels
	Skeletal X-ray

[Dashboard](#)

□ Question 6 of 215

□ □

A 75-year-old man presents to referred to the diabetic clinic by his general practitioner with newly identified hyperglycaemia. He had presented with a two month history of polyuria, polydipsia and diarrhoea and was found to have a blood sugar of 18.4 mmol/L. Over this time period he had lost 6kg and now weighed 61kg. His past medical history includes hypertension and a deep vein thrombosis which was diagnosed three months ago. He takes amlodipine 10mg and warfarin.

What is the diagnosis?

	Glucagonoma
	Type one diabetes mellitus
	Cushing's syndrome
	Drug induced diabetes
	Type two diabetes mellitus

Dashboard

Overall score: 0%

1 -

□ Question 6 of 215

□ □

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	Glucagonoma
	Type one diabetes mellitus
	Cushing's syndrome
	Drug induced diabetes
	Type two diabetes mellitus

Dashboard

Overall score: **0%**

1 -

□ Question 7 of 215



A 42 year-old man presents to his GP with a 3 month history of increasing anxiety. On further questioning, he has lost 6 kg of weight over the past 2 months and has been experiencing increased bowel movements and diarrhoea.

Blood tests are performed and reveal:

Hb	14.2 g/dL	
Platelets	$210 \times 10^9/l$	
WBC	$6.9 \times 10^9/l$	
Thyroid stimulating hormone (TSH)	0.08 mu/l	
Free thyroxine (T4)	17.4 pmol/l	
Total triiodothyronine (T3)	13.4 nmol/l	Normal range (4.0-8.3 nmol/l)

What is the most appropriate treatment?

	Reassurance
	Carbimazole
	Radio-iodine
	Surgery
	Propranolol

Dashboard

Overall score: 0%

□ Question 7 of 215



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	Reassurance
	Carbimazole
	Radio-iodine
	Surgery
	Propranolol

Dashboard

Overall score: **0%**

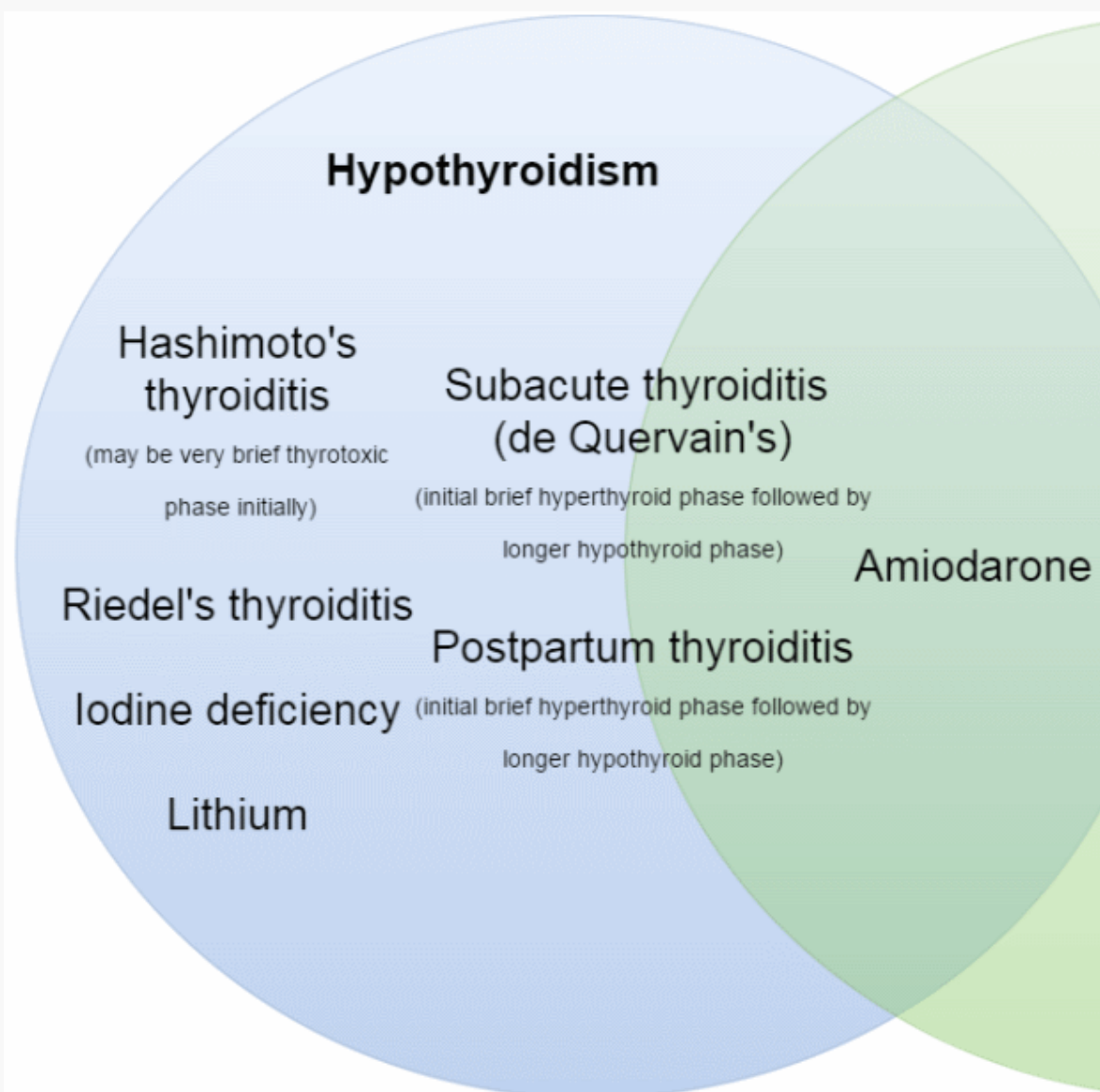
Question 7 of 215

A 42 year-old man presents with a 10 kg of weight over the past 2 years.

Blood tests are performed and the results are as follows:

Hb
Platelets
WBC
Thyroid stimulating hormone (TSH)
Free thyroxine (T4)
Total triiodothyronine (T3)

What is the most appropriate treatment?



<input type="radio"/>	Reassurance
<input type="radio"/>	Carbimazole
<input type="radio"/>	Radio-iodine
<input type="radio"/>	Surgery
<input type="radio"/>	Propranolol

Dashboard

Overall score: 0%

□ Question 8 of 215

□ □

A 24-year-old woman with a history of cystic fibrosis comes to the endocrinology clinic for review. She has been losing weight and a recent fasting plasma glucose has been measured at 8.1 mmol/l. Over the past year there has been three admissions to hospital with exacerbations of her CF. On examination her blood pressure is 122/81 mmHg, pulse is 71 beats per minute and regular. Auscultation of the chest reveals coarse crackles and scattered wheeze. Abdomen is soft and on tender, her body mass index is 19.5 kg/m². Which of the following is the best way to manage her diabetes?

	Low calorie diet
	Insulin and high calorie diet
	Metformin and low calorie diet
	Gliclazide and standard calorie diet
	Dapagliflozin and low calorie diet

Dashboard

Overall score: 0%

1 -

□ Question 8 of 215

□ □

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	Metformin and low calorie diet
	Gliclazide and standard calorie diet
	Dapagliflozin and low calorie diet

Dashboard

Overall score: **0%****1** -

Question 9 of 215

□ □

A 40-year-old female presented to Endocrinology Clinic with a 3-month history of weight gain, fatigue and headaches. Over the last 3 weeks, she has also experienced galactorrhoea and reduced libido. She was diagnosed with type 2 diabetes and hypertension 1 month ago and is on diet control for both. She is not currently on any regular medications. On examination, there was evidence of hirsutism and acne, a cervical fat pad, striae on her abdomen and proximal myopathy. Areas of hyperpigmentation were noted on her mucous membrane and palmar creases.

Which of the following investigations will reveal the diagnosis?

	Low dose dexamethasone suppression test
	Prolactin levels
	Urinary cortisol
	CT brain
	MRI pituitary

Dashboard

Overall score: 0%

1 -

□ Question 9 of 215

□ □

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Which of the following investigations will reveal the diagnosis?

	Low dose dexamethasone suppression test
	Prolactin levels
	Urinary cortisol
	CT brain
	MRI pituitary

Dashboard

Overall score: **0%****1** -

Question 10 of 215



A 21-year-old male presents to his GP complaining of muscle cramps that prevent him from competing in his local park 5 km race. He has always had muscle pains when warming up with exercise but these gradually diminish after 20 minutes. There was no weakness and no abnormalities on neurological exam.

Creatinine kinase was elevated at 1215 IU/L and myoglobinuria was noted on urinalysis. The electromyography (EMG) demonstrated myotonic discharges and fibrillations.

What is the likely diagnosis?

	Hypokalaemic periodic paralysis
	Von Gierke disease
	McArdle disease
	Pompe disease
	Gaucher disease

Dashboard

Overall score: 0%

1 -

Question 10 of 215



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Dashboard

Overall score: 0%

1 -

□ Question 11 of 215

□ □

You review a 28-year-old woman who is 26 weeks pregnant. She has just had a routine oral glucose tolerance test as her BMI is 34 kg/m². The following results were obtained:

Time (hours)	Blood glucose (mmol/l)
0	7.4
2	11.2

There have been no other antenatal problems and her anomaly scan was normal. What is the most appropriate action?

	Repeat oral glucose tolerance test in 4 weeks
	Start metformin + advice about diet / exercise + self-monitor glucose levels
	Advice about diet / exercise + self-monitor glucose levels
	Start insulin + advice about diet / exercise + self-monitor glucose levels
	Reassure results within normal limits

Dashboard

Overall score: 0%

1 -

□ Question 11 of 215

□ □

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	Reassure results within normal limits

Dashboard

Overall score: **0%****1** -

□ Question 12 of 215



A 76 year old woman was admitted to hospital after presenting to the Emergency Department with shortness of breath, productive cough and palpitations. A chest x-ray demonstrated a left lower lobe pneumonia and ECG showed atrial fibrillation with a fast ventricular response. Initial management included intravenous antibiotics, intravenous fluids and oral digoxin loading.

Two days after admission, the patient's condition had significantly improved and she was able to start mobilising on the ward. The palpitations that she had been experiencing at presentation had also ceased. Following review by the Senior House Officer on the ward round, a repeat ECG was requested when demonstrated that the patient had cardioverted back to sinus rhythm. Digoxin therapy was subsequently held.

To investigate for an underlying cause of atrial fibrillation, thyroid function tests were added to blood tests from admission, with results as listed below.

Haemoglobin	125 g / dL
White cell count	13.7* 10 ⁹ /l
Neutrophils	11.9* 10 ⁹ /l
Platelets	351 * 10 ⁹ /l
Urea	4.6 mmol / L
Creatinine	130 micromol / L
Sodium	139 mmol / L
Potassium	3.6 mmol / L
C-reactive protein	105 mg / L
Thyroid stimulating hormone	0.25 microU / L
T4 free serum	14.1 pmol / L
T3 free serum	7.4 pmol / L

What is the most appropriate next investigation to assess deranged thyroid function tests?

	Thyroid ultrasound
	Thyroid peroxidase antibody levels
	Repeat TFT in 6 weeks
	Thyroid scintiscanning
	Thyroglobulin antibody levels

Dashboard

Overall score: 0%

1 -

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	Repeat TFT in 6 weeks
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Dashboard

Overall score: 0%

1 -

□ Question 13 of 215



A 23-year-old female presents with worsening acne and a marked increase in the development of body and facial hair which she finds very distressing. She is also overweight and is markedly stressed by her physical appearance and the development of stretch marks over her abdomen. She has tried multiple hair removal techniques with only mild success.

On examination, she has a body mass index of 28 kg/m², coarse hair over the anterior and posterior part of her chest and under her chin. Her Blood Pressure is 135/90mmHg.

Her lab results are as follows:

9:00 am Cortisol	345 nmol/l (170 700 nmol/l)
LH	17 iU/l (1 20 iU/l)
Basal FSH	7.1 iU/l (1.0 8.8 iU/l)
DHEAS	545 µg/dl (31 228 µg/dl)
Prolactin	160 mU/l (<360 mU/l)
17 OH Progesterone	1025 ng/dl (<80 ng/dl)
Testosterone	3.9 nmol/l (0.9 3.1 nmol/l)

Ultrasound abdomen and pelvis reveals two cysts in the right ovary.

Which of the following is the most appropriate treatment option for her condition?

	Combined oral contraceptive pill
	Finasteride
	Surgical resection of the ovarian cysts
	Reverse circadian rhythm steroids

Dashboard

Overall score: **0%**

1 -

□ Question 13 of 215



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Dashboard

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1 -

□ Question 13 of 215



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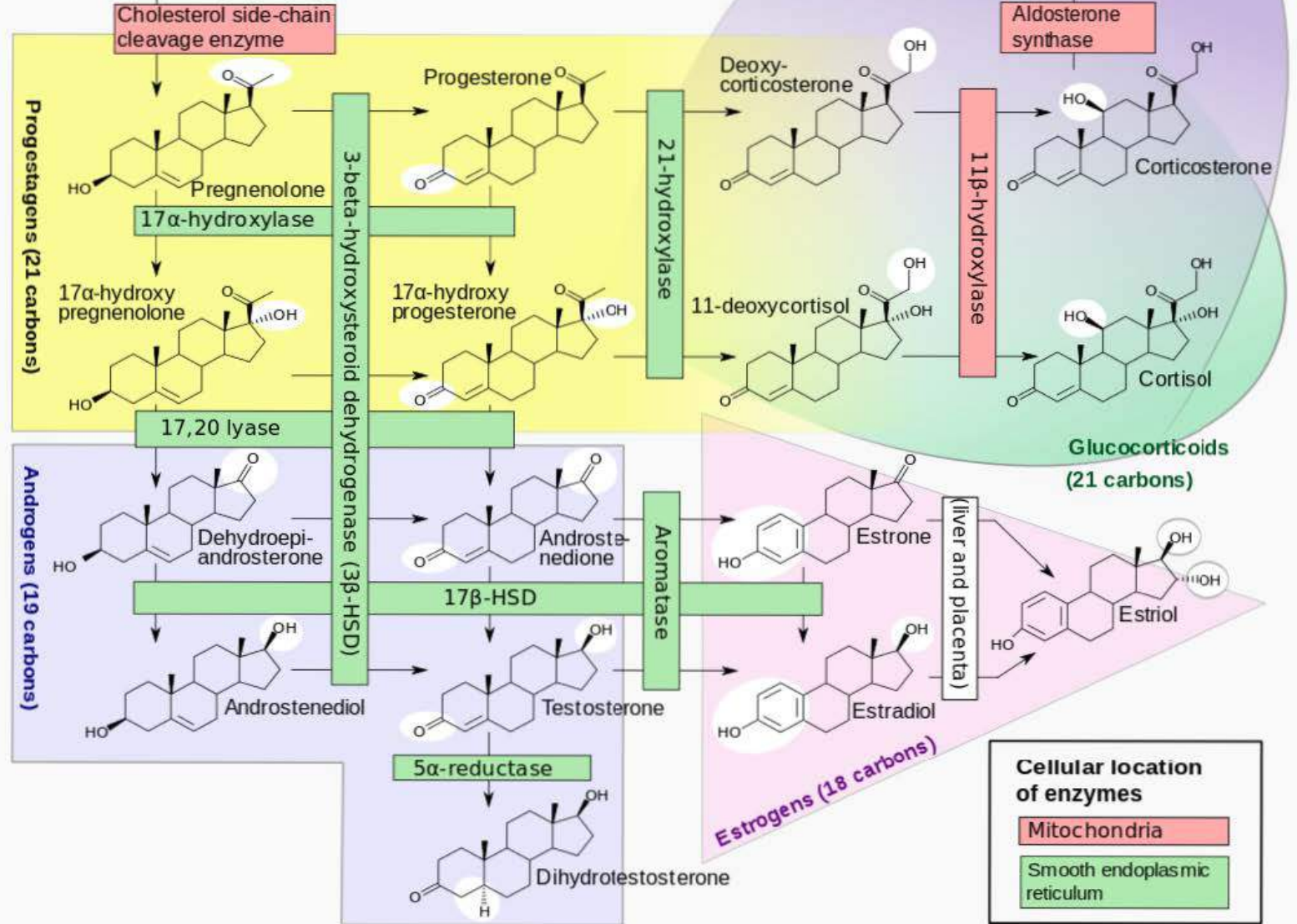
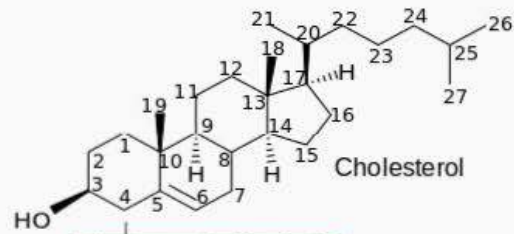
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Testosterone	3.9 nmol/l (0.9 3.1 nmol/l)

Ultrasound abdomen and pelvis reveals two cysts in the right ovary.

Which of the following is the most appropriate treatment option for her condition?

	Combined oral contraceptive pill
	Finasteride
	Surgical resection of the ovarian cysts
	Reverse circadian rhythm steroids
	Metformin in combination with spironolactone



Question 14 of 215

A 26-year-old man is reviewed in gastroenterology clinic. He is known to have Crohn's disease which has been stable over the last six months and not required any recent steroids or hospital admissions. Routine blood tests demonstrate a vitamin D level at 22 nmol/L. All other blood tests, including calcium, are within normal range. What is the most appropriate management plan?

<input type="checkbox"/>	No treatment needed
<input type="checkbox"/>	Dietary advise only
<input type="checkbox"/>	Maintenance dose vitamin D
<input type="checkbox"/>	Loading dose vitamin D
<input type="checkbox"/>	Combined calcium and vitamin D

Dashboard

Overall score: 0%

1 -



Question 14 of 215



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<input type="checkbox"/>	No treatment needed
<input type="checkbox"/>	Dietary advise only
<input type="checkbox"/>	Maintenance dose vitamin D
<input checked="" type="checkbox"/>	Loading dose vitamin D
<input type="checkbox"/>	Combined calcium and vitamin D

The correct answer is loading dose vitamin D. He has a serum concentration <30 nmol/L and therefore has vitamin D deficiency, likely secondary to his Crohn's disease. He, therefore, needs a loading dose of vitamin D. As calcium levels are normal there is no current indication for supplementation.

Vitamin D deficiency versus insufficiency

Description	Serum levels	Treatment
Adequate vitamin D	>50 nmol/L	dietary recommendations
Insufficient vitamin D	30-50 nmol/L	maintenance dose vitamin D
Deficient vitamin D	<30 nmol/L	loading dose vitamin D

Source:

'Vitamin D Deficiency in Adults - Treatment and Prevention.' Clinical Knowledge Summaries. National Institute for Health and Care Excellence, Nov. 2016.

Please rate this question:



☐ Discuss and give feedback

Osteomalacia

Basics

- normal bony tissue but decreased mineral content
- rickets if when growing
- osteomalacia if after epiphysis fusion

Types

- vitamin D deficiency e.g. malabsorption, lack of sunlight, diet
- renal failure
- drug induced e.g. anticonvulsants
- vitamin D resistant; inherited
- liver disease, e.g. cirrhosis

Features

- rickets: knock-knee, bow leg, features of hypocalcaemia
- osteomalacia: bone pain, fractures, muscle tenderness, proximal myopathy

Investigation















- low calcium, phosphate, 25(OH) vitamin D
- raised alkaline phosphatase
- x-ray: children - cupped, ragged metaphyseal surfaces; adults - translucent bands (Looser's zones or pseudofractures)

Treatment

- calcium with vitamin D tablets

Dashboard

Overall score: **14.3%**

- | | |
|----|---|
| 1 |  |
| 2 |  |
| 3 |  |
| 4 |  |
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| 11 |  |
| 12 |  |
| 13 |  |
| 14 |  |

Question 15 of 215



A 56-year-old man is referred to clinic by his General Practitioner as his GP had performed some routine blood tests which showed a K⁺ of 2.8 mmol/l. The patient feels well in himself. His past medical history includes angina and renal stones. On examination his chest is clear and his abdomen is soft and non-tender.

Observations are as follows: temperature 36.3, blood pressure 132/86 mmHg, heart rate 78/min, respiratory rate 16/min, saturations 95% on air

His ECG shows normal sinus rhythm.

Investigations are as follows:

Na ⁺	142 mmol/l
K ⁺	2.8 mmol/l
Creat	117 µmol/l
Urea	9.6 mmol/l
Urinary K ⁺	26 mmol/l (normal <20)
PaO ₂	11.2 kPa
PaCO ₂	3.6 kPa
pH	7.32
HCO ₃ ⁻	18 mmol/l
Base excess	-3 mmol/l

What is the most likely cause of his hypokalaemia?

	Barter's Syndrome
	Liddle's Syndrome

	Renal tubular acidosis type 1
	Renal tubular acidosis type 2
	Renal tubular acidosis type 4

Dashboard

Overall score: **13.3%**

1

✗

2

✗

3

✗

4

✗

5

✓

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✓

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10

✗

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✗

12

✗

13

✗

14

✗

15

✗

Question 15 of 215



A 56-year-old man is referred to clinic by his General Practitioner as his GP had performed some routine blood tests which showed a K+ of 2.8 mmol/l. The patient feels well in himself. His past medical history includes angina and renal stones. On examination his chest is clear and his abdomen is soft and non-tender.

Observations are as follows: temperature 36.3, blood pressure 132/86 mmHg, heart rate 78/min, respiratory rate 16/min, saturations 95% on air

His ECG shows normal sinus rhythm.

Investigations are as follows:






Na+	142 mmol/l
K+	2.8 mmol/l
Creat	117 μmol/l
Urea	9.6 mmol/l
Urinary K+	26 mmol/l (normal <20)
PaO2	11.2 kPa
PaCO2	3.6 kPa
pH	7.32
HC03-	18 mmol/l
Base excess	-3 mmol/l

What is the most likely cause of his hypokalaemia?

	Barter's Syndrome
	Liddle's Syndrome
	Renal tubular acidosis type 1
	Renal tubular acidosis type 2
	Renal tubular acidosis type 4

Dashboard

Overall score: 13.3%

- 1 
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- 3 
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- 6 ✓
- 7 ✗
- 8 ✗
- 9 ✗
- 10 ✗
- 11 ✗
- 12 ✗
- 13 ✗
- 14 ✗
- 15 ✗



□ Question 16 of 215



A 45-year-old woman presents to the Emergency Department with abdominal pain. Her GP is currently investigating her for lethargy, weakness and abdominal pain. Her symptoms have been getting progressively worse over the past few months. There is no past medical history of note. She smokes 5-10 cigarettes/day and drinks around 20 units of alcohol per week.

A urine dipstick has already been performed: protein trace, blood +, pH 5.5-6.0

Bloods show the following:

Hb	13.6 g/dl	Na ⁺	143 mmol/l
Platelets	225 * 10 ⁹ /l	K ⁺	2.3 mmol/l
WBC	8.4 * 10 ⁹ /l	Urea	6.1 mmol/l
Neuts	6.0 * 10 ⁹ /l	Creatinine	81 µmol/l
Lymphs	1.9 * 10 ⁹ /l	Bicarbonate	7 mmol/l
Eosin	0.3 * 10 ⁹ /l	Chloride	124 mmol/l

An abdominal film is requested due to her recurrent abdominal pains:



© Image used on license from Radiopaedia



What is the most likely diagnosis?



	Renal tubular acidosis type 1
	Renal tubular acidosis type 2
	Renal tubular acidosis type 4
	Conn's syndrome
	Bulimia

Dashboard

Overall score: 13.3%

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□ Question 16 of 215



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© Image used on license from Radiopaedia



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	Renal tubular acidosis type 2
	Renal tubular acidosis type 4
	Conn's syndrome
	Bulimia

Dashboard

Overall score: 13.3%

1 **X**

2

- 
- 3 
- 4 
- 5 
- 6 
- 7 
- 8 
- 9 
- 10 
- 11 
- 12 
- 13 
- 14 
- 15 

□ Question 16 of 215

□ □

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© Image used on license from Radiopaedia



What is the most likely diagnosis?

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	Renal tubular acidosis type 2
	Renal tubular acidosis type 4
	Conn's syndrome
	Bulimia

Dashboard

Overall score: 13.3%

1

✗

2

✗

3

✗

4

✗

5

✓

6

✓

7

✗

8

✗

9

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10

✗

11

✗

12

✗

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14

✗

15

✗



□ Question 17 of 215

□ □

A 64-year-old woman comes to the Emergency department complaining of palpitations at rest, and worsening angina over the past month. She has been treated with amiodarone for the past 3 years for recurrent ventricular tachycardia. She has a blood pressure of 110/70 mmHg, pulse of 95 beats per minute, and a fine tremor. There is no goitre. TSH is suppressed at less than 0.05 U/ml.

You suspect she has amiodarone induced thyrotoxicosis. How best can you determine the underlying pathophysiology?

	IL6 level
	Thyroglobulin level
	TSH level
	Duration of amiodarone therapy
	Colour flow doppler ultrasonography

Dashboard

Overall score: 13.3%

1 ✗

2 ✗

3 ✗

4 ✗

5 ✓

6 ✓

7

□ Question 17 of 215

□ □

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	IL6 level
	Thyroglobulin level
	TSH level
	Duration of amiodarone therapy
	Colour flow doppler ultrasonography

Dashboard

Overall score: **13.3%**1 2 3 4 5 6 

7

□ Question 18 of 215

□ □

A 34 year-old woman is seen by her GP for the annual review of her type 1 diabetes. Her most recent HbA1c is 58 mmol/mol and the only problem she has noticed are severe hypoglycaemic episodes during the night around 2-4am, that she noticed she was getting while working night shifts for a local superstore. However, by breakfast time, her blood glucose levels often rise to around 15 mmol/mol. Her insulin regimen is currently a twice daily mixed insulin.

What is the most appropriate change to her current insulin treatment?

	Move to a basal bolus of insulin
	Take 1 dextrose tablet at 9pm
	Reduce nocturnal insulin dose
	Reduce morning insulin dose
	Add gliclazide

Dashboard

Overall score: 13.3%

1 ✗

2 ✗

3 ✗

4 ✗

5 ✓

6 ✓

7

□ Question 18 of 215

□ □

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	Take 1 dextrose tablet at 9pm
	Reduce nocturnal insulin dose
	Reduce morning insulin dose
	Add gliclazide

Dashboard

Overall score: **13.3%**

1 

2 

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4 

5 

6 

7

□ Question 19 of 215



A 55-year-old female has noticed an enlarging neck lump and comes for review with you. Her TSH is low. Apart from the large goitre, there were no other significant findings on physical examination. What is the best next test to performed?

	Anti-TSH antibodies
	Thyroid US
	Thyroid Technetium scan
	Thyroid nodule biopsy
	Thyroidectomy

Dashboard

Overall score: 13.3%

1 ✗

2 ✗

3 ✗

4 ✗

5 ✓

6 ✓

7 ✗

8 ✗

9 ✗

□ Question 19 of 215

□ □







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	Thyroid US
	Thyroid Technetium scan
	Thyroid nodule biopsy
	Thyroidectomy

Dashboard

Overall score: 13.3%

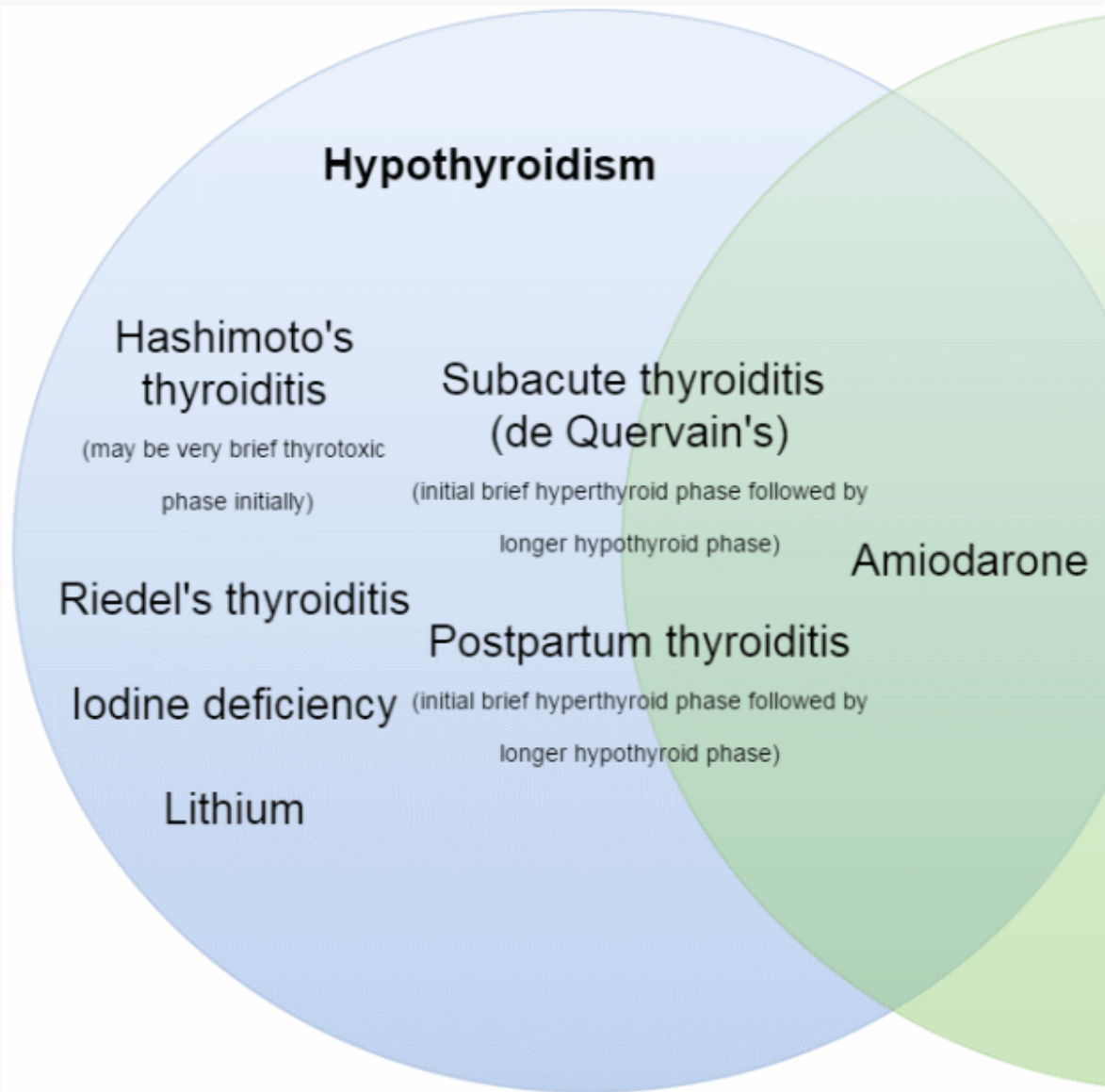
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Question 19 of 215

A 55-year-old female has no previous thyroid disease. On examination, there is a large goitre, there were no clinical features of hyperthyroidism.

	Anti-TSH antibodies
	Thyroid US
	Thyroid Technetium scan
	Thyroid nodule biopsy
	Thyroidectomy



Overall score: 13.3%

- 1 X
- 2 X
- 3 X
- 4 X
- 5 ✓
- 6 ✓
- 7 X
- 8 X
- 9 X

Question 20 of 215

□ □

A 56-year-old Kenyan female has a 6 month history of weight loss of 5 kg associated with episodic severe colicky abdominal pain not associated with eating or bowel opening.

Na ⁺	126 mmol/l
K ⁺	6.5 mmol/l
Urea	14.3 mmol/l
Creatinine	157 µmol/l
Glucose	3.2 mmol/l
T4	7.5 pmol/L (NR 9-20 pmol/L)
TSH	11.2 mIU/L (NR 0.3-6.0 mIU/L)

Thyroid antibodies are not detected.

What is the most likely diagnosis?

	Hypopituitarism
	MEN type 1
	Autoimmune adrenal failure
	Primary hypothyroidism
	Adrenal failure secondary to TB

Question 20 of 215



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T4	7.5 pmol/L (NR 9-20 pmol/L)
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Thyroid antibodies are not detected.

What is the most likely diagnosis?

	Hypopituitarism
	MEN type 1
	Autoimmune adrenal failure
	Primary hypothyroidism
	Adrenal failure secondary to TB

□ Question 21 of 215

□ □

A 60-year-old taxi driver presents to the diabetes clinic for review. He is obese with a body mass index of 36 kg/m², and has noticed a significant increase in his fasting blood glucose over the past 3 months from 6.5 mmol/l, to over 9 mmol/l. Apart from hypertension he has no other significant past medical history. Current medication includes metformin 1g BD, ramipril 10mg OD and atorvastatin 20mg OD. On examination his blood pressure is 155/82 mmHg, pulse is 70 beats per minute and regular. His chest is clear, abdomen is soft and non-tender with no masses, and he has no ankle swelling. Bloods reveal a normal creatinine and an HbA1c of 70 mmol/mol.

Which of the following is the most appropriate way to manage his blood glucose?

	Gliclazide
	Liraglutide
	Sitagliptin
	BD mixed insulin
	Acarbose

Dashboard

Overall score: 13.3%

1 2 3 4 5 

□ Question 21 of 215

□ □

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Which of the following is the most appropriate way to manage his blood glucose?

	Gliclazide
	Liraglutide
	Sitagliptin
	BD mixed insulin
	Acarbose

Dashboard

Overall score: 13.3%

1 

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Question 22 of 215

□ □

A 42-year-old woman was seen in Endocrinology Clinic with a 4 month history of amenorrhoea. On questioning she reports having to wax her arms and upper lip. Her mother went through early menopause at 28 after having an emergency hysterectomy post-partum. On examination her BMI is 38 but otherwise unremarkable.

Her GP has kindly ordered blood tests prior to her appointment

Investigations

LH	40 IU/L (5 to 25 IU/L)
FSH	8 IU/ (1 to 11 IU/L)
Estradiol	720 pmol/L (70-500 pmol/L)
Progesterone	220 nmol/L (35-92 nmol/L)
Thyroid Stimulating Hormone	5.6 mIU/L (0.5 -6.0 mIU/L)
Prolactin	700 mIU/L (105-548mIU/L)

What is the most likely diagnosis?

	Prolactinoma
	Polycystic Ovarian Syndrome
	Premature Ovarian Failure
	Pregnancy
	Subclinical Hypothyroidism

Question 22 of 215

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What is the most likely diagnosis?

	Prolactinoma
	Polycystic Ovarian Syndrome
	Premature Ovarian Failure
	Pregnancy
	Subclinical Hypothyroidism

Question 23 of 215

□ □

A 45-year-old man was commenced on 500mg metformin BD for type 2 diabetes mellitus as he was unable to meet his target HBA1c of 6.5% 6 months ago. He is now presenting for his regular follow up and feels well. He states that he has been compliant with his metformin, maintaining a healthy diet and exercising more regularly. His latest HBA1c is 7.3% and the rest of his investigations are normal. What is the next best step to manage his diabetes?

	Increase his dose of metformin
	Add pioglitazone
	Make no change to his current treatment
	Add a sulfonylurea
	Advise to increase frequency of exercise

Dashboard

Overall score: 13.3%

1 ✗

2 ✗

3 ✗

4 ✗

5 ✓

6 ✓

7 ✗

8 ✗

Question 23 of 215

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Dashboard

Overall score: **13.3%**

- 1
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Question 23 of 215



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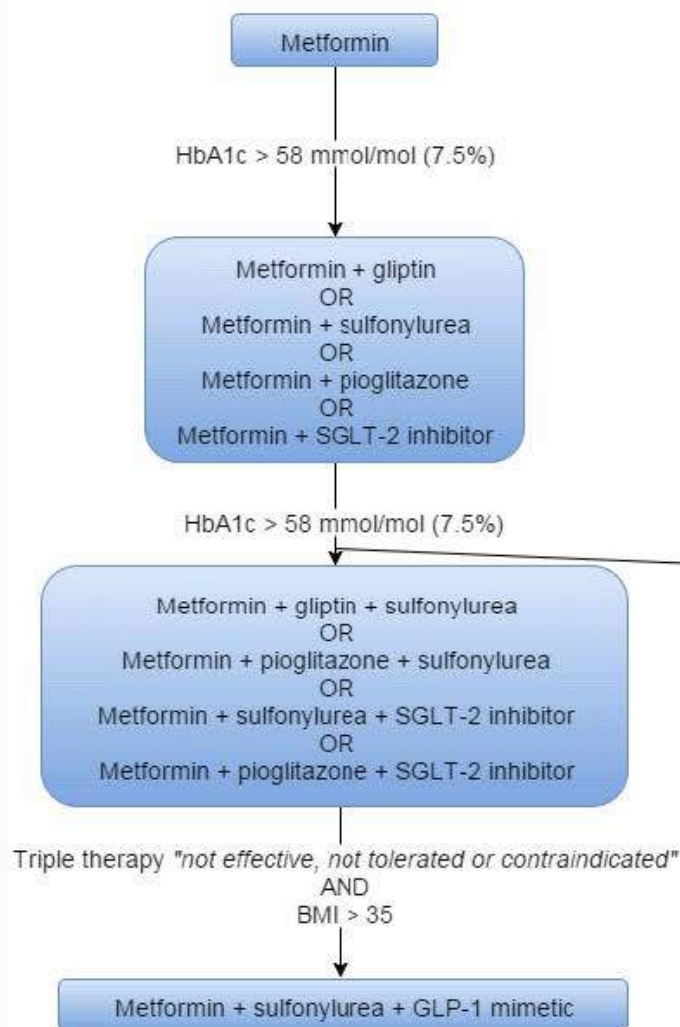
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Dashboard

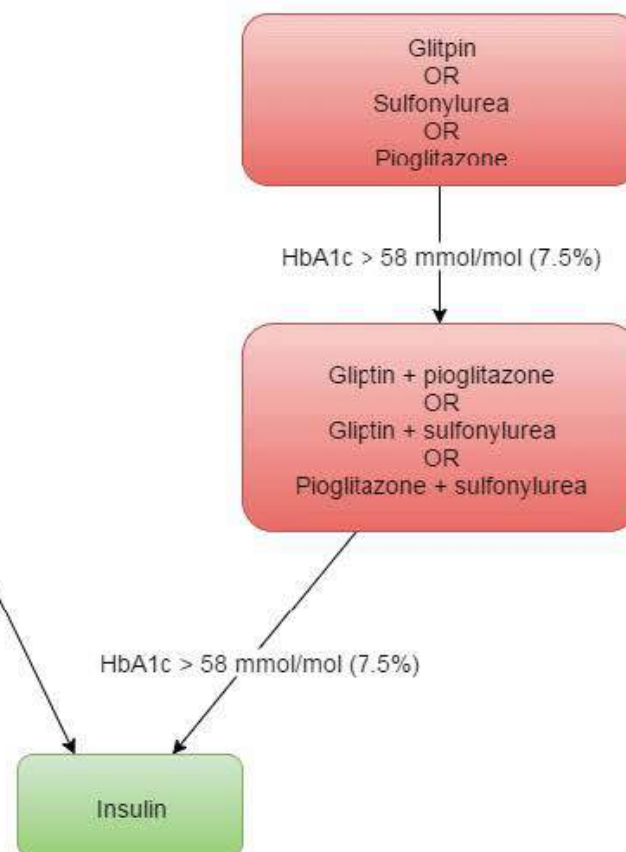
Overall score: **13.3%**

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Metformin



Metformin not tolerated or CI



Question 23 of 215

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target HBA1c of 6.5% 6 mor
been compliant with his met
and the rest of his investiga

	Increase his dose c
	Add pioglitazone
	Make no change to
	Add a sulfonylurea
	Advise to increase frequency of exercise

Primary prevention

(10-year cardiovascular risk $\geq 10\%$ OR
most type 1 diabetics OR
CKD if eGFR $< 60\text{ml/min/m}^2$)

(kn

Atorvastatin 20mg od

(if non-HDL has not fallen by $\geq 40\%$ then
consider titrating up to 80mg)

Dashboard

Overall score: 13.3%

- 1 ✗
- 2 ✗
- 3 ✗
- 4 ✗
- 5 ✓
- 6 ✓
- 7 ✗
- 8 ✗

□ Question 1 of 191



A 35-year-old man was assessed in endocrinology clinic after being referred by his GP for advice on management of the consequences of the patient's use of anabolic steroids. The patient reported that he had been using anabolic steroids intermittently for the previous 10 years to augment his weight-training regime. Having recently become aware of the potential adverse health consequences, the patient now wished to know how he could safely stop his anabolic steroid use.

The patient described his pattern of anabolic steroid use: typically, he had been taking a 'cycle' of one or more oral synthetic testosterone derivatives for between 6-12 weeks, prior to a 3-4 week break in his use of steroids. The patient stated this strategy was an attempt to minimise his risk of side effects. The patient had not received any medical supervision of his anabolic steroid use, relying instead on discussions with friends at his gym and information from online forums. The patient declined to disclose the source from which he had obtained his supply of medications.

The patient stated that he believed his anabolic steroid use had contributed to his male pattern baldness and also had caused intermittent breakouts of acne on his chest and face. The patient was not aware of any other symptoms related to his steroid use, although stated that he was concerned about possible lasting cardiac side effects. The patient had no other significant medical history and took no other regular medications. He did not consume cigarettes, alcohol or recreational drugs.

General examination of the patient revealed a muscular and lean adult male in apparent good health. A cardiovascular system examination noted a forceful but not displaced apex beat. Mild gynaecomastia was present but gastrointestinal examination was otherwise unremarkable. Using an orchidometer the patient's testicular volume was estimated as 16 ml. Although anxious about the possible health consequences of his anabolic steroid use, the patient did not seem to be significantly depressed or anxious.

Haemoglobin	173 g / dL
Sodium	148 mmol / L
Potassium	3.6 mmol / L
Alkaline phosphatase	135 U / L (reference 35-100)
ALT	32 U / L (reference 3-36)
Bilirubin	20 micromol / L (reference < 26)

Prolactin	469 mU / L (reference 80 - 400)
Luteinising hormone	0.9 IU / L (reference 1.8 - 8.6)
Follicle-stimulating hormone	1.2 mU / ml (reference 1.5 - 12.4)
Fasting LDL cholesterol	4.1 mmol / L (reference < 3.0)
Fasting HDL cholesterol	1.0 mmol / L (reference > 1.2)
HbA1C	45 mmol / mol (reference < 42)

What is the appropriate advice to the patient regarding the safe cessation of anabolic steroid use?

<input type="radio"/>	Convert patient to prescribed testosterone replacement and taper over 1 year
<input type="radio"/>	Taper anabolic steroid use over period of 6 months
<input type="radio"/>	Stop immediately, tapered withdrawal not required
<input type="radio"/>	Taper anabolic steroid use over period of 6 weeks
<input type="radio"/>	Convert patient to prescribed testosterone replacement and continue lifelong

Dashboard

Overall score: **0%**

1 -

□ Question 1 of 191



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	Taper anabolic steroid use over period of 6 weeks
	Convert patient to prescribed testosterone replacement and continue lifelong

Dashboard

Overall score: **0%**

1 -

Question 2 of 191

□ □

A 47-year-old builder presented with paraesthesia in both hands which was worse at night. His hands felt swollen, although they were not painful, and he had needed to buy a larger pair of work gloves. When at work he found that his hands felt weak. Over the past six months he had been experiencing urinary frequency, fatigue and increased thirst.

He had a past medical history of obesity and hypertension and his brother had type II diabetes mellitus. His only medication was ramipril. He was a heavy smoker with a 20 pack year history.

On examination of the arms there was weakness of thumb abduction bilaterally and diminished sensation over the radial three and a half digits. Percussion over the palmar aspect of the wrist reproduced the paraesthesia he described on presentation. On examination of the chest and abdomen there were areas of pigmentation in both axillae and striae over the abdomen. He had a protruberent abdomen and an elevated body mass index (BMI).

Which of the following investigations is most likely to be diagnostic?

	Magnetic Resonance Imaging of the Pituitary and visual field testing
	Fasting glucose on three occasions, glycosylated haemoglobin (HbA1c) and a 9am cortisol measurement
	Growth hormone measurement and dexamethasone suppression test
	Nerve conduction studies and electromyogram (EMG)
	Oral glucose tolerance test with serum glucose, IGF-1 and growth hormone measurements

Dashboard

Overall score: 0%

1 -

□ Question 2 of 191

□ □

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	Nerve conduction studies and electromyogram (EMG)
	Oral glucose tolerance test with serum glucose, IGF-1 and growth hormone measurements

Dashboard

Overall score: **0%**

1 -

Question 3 of 191

□ □

A lady who is 10 weeks pregnant presents to her antenatal appointment asking for advice regarding gestational diabetes. She is a 31 year old English lady with a BMI (body mass index) of 28.7. In terms of family history she has a cousin who has type 1 diabetes mellitus and an aunt who is being treated for breast cancer. She has had two previous pregnancies, the first one she unfortunately miscarried at 8 weeks, and the second was a normal pregnancy that she took to term with a birth weight of 4.6kg. Neither of these pregnancies was complicated with gestational diabetes, and the baby is now 2 years old and has not had to be taken to see a doctor other than routine appointments.

What is the most appropriate testing regime for ruling out gestational diabetes in this woman?

	Oral glucose tolerance test at 24-28 weeks pregnant
	None - as she has no risk factors for gestational diabetes
	Oral glucose tolerance test at 12-14 weeks pregnant
	Self-monitoring of sugars and repeat appointment in 2 weeks
	HBa1c

Dashboard

Overall score: 0%

1 -

□ Question 3 of 191

□ □

A lady who is 10 weeks pregnant presents to her antenatal appointment asking for advice regarding gestational diabetes. She is a 31 year old English lady with a BMI (body mass index) of 28.7. In terms of family history she has a cousin who has type 1 diabetes mellitus and an aunt who is being treated for breast cancer. She has had two previous pregnancies, the first one she unfortunately miscarried at 8 weeks, and the second was a normal pregnancy that she took to term with a birth weight of 4.6kg. Neither of these pregnancies was complicated with gestational diabetes, and the baby is now 2 years old and has not had to be taken to see a doctor other than routine appointments.

What is the most appropriate testing regime for ruling out gestational diabetes in this woman?

	Oral glucose tolerance test at 24-28 weeks pregnant
	None - as she has no risk factors for gestational diabetes
	Oral glucose tolerance test at 12-14 weeks pregnant
	Self-monitoring of sugars and repeat appointment in 2 weeks
	HBa1c

Dashboard

Overall score: **0%**

1 -

□ Question 4 of 191



A 58-year-old man who has no fixed abode comes to the Emergency department because he is unable to walk. He has a history of alcoholism and type 2 diabetes. His main complaint is that his shoes have worn out and because of loss of sensation he didn't notice that he had stepped on a nail. In total the lesion on his right foot has been present for approximately 3 weeks.

Which of the following is the next step in evaluating his foot injury?

	Inflammatory markers
	MRI foot
	Plain x-ray foot
	USS foot
	Wound swab

Dashboard

Overall score: 0%

1 -

□ Question 4 of 191



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	MRI foot
	Plain x-ray foot
	USS foot
	Wound swab

Dashboard

Overall score: **0%**

1 -

□ Question 5 of 191

□ □

A 44-year-old woman is admitted to hospital complaining of a swollen breast for three days. She is otherwise well, having no medical problems. She is diagnosed by the surgical team with a breast abscess, which is drained and she is started on antibiotic treatment. Before being discharged, she is found to have elevated corrected calcium (2.79 mmol/L) and elevated parathyroid hormone (9.5 pmol/L).

She is reviewed by the endocrine team. She does not have any symptoms apart from those related to her breast abscess, and additional examination is unremarkable. Further tests are requested, showing that vitamin D levels are normal, 24-hour urine calcium is normal, and a DEXA scan is normal as well. She is advised to see her GP for annual blood tests for calcium levels and renal function.

She is diagnosed with primary hyperparathyroidism. What additional investigation should be used to monitor her?

	24-hour urine calcium annually
	Breast ultrasound annually
	Abdominal X-ray annually
	Abdominal ultrasound every three years
	DEXA scan every one to two years

Dashboard

Overall score: 0%

1 -

□ Question 5 of 191

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□ Question 5 of 191

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Dashboard

Overall score: 0%

1 -







□ Question 6 of 191



You are asked to review a 42- year- old alcoholic who has been admitted to the medical ward following 48hrs of vomiting, generalised muscle weakness and palpitations. Despite two calcium infusions, the most recent measured calcium is still 1.89 mmol/l. On examination his blood pressure is 95/60 mmHg, pulse is 95 beats per minute and regular. You note intermittent runs of SVT on his cardiac monitor.

Other urea and electrolytes are shown below:

Na ⁺ 132	mmol/l
K ⁺ 3.7	mmol/l
Urea 5.4	mmol/l
Creatinine 82	μmol/l
Glucose 5.2	mmol/l

Which of the following is the most appropriate next step?

	IV calcium
	IV magnesium
	IV potassium
	IV phosphate
	IV glucose

□ Question 6 of 191



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	IV calcium
	IV magnesium
	IV potassium
	IV phosphate
	IV glucose

Question 7 of 191



A 52 year-old woman presents with a two day history of nausea and fever. On admission she is confused and her husband states that she was recovering from a recent upper respiratory tract infection and sore throat. He also mentions she has previously been experiencing episodes of diarrhoea and palpitations over the last three months.

Examination reveals a temperature of 40.6°C, pulse rate of 160 beats per minute and blood pressure of 110/70 mmHg. Her pulse is irregularly irregular. Heart sounds 1 and 2 are present with no added sounds, lung fields are clear and her abdomen is soft and none tender, with bowel sounds being present.

Blood tests are taken and reveal:

Hb	13.2 g/dL
Platelets	180 * 10 ⁹ /l
WBC	10.2 * 10 ⁹ /l
Na ⁺	135 mmol/l
K ⁺	4.2 mmol/l
Urea	7.2 mmol/l
Creatinine	132 µmol/l
Thyroid stimulating hormone (TSH)	0.03 mu/l
Free thyroxine (T4)	31 pmol/l
Total thyroxine (T4)	220 nmol/l

What is the most appropriate immediate treatment?

	Carbimazole, corticosteroids and propranolol
	Carbimazole and propranolol

	Radio-iodine, corticosteroids and propranolol
	Carbimazole and corticosteroids
	Propylthiouracil, propranolol and carbimazole

Dashboard

Overall score: **0%**
1 -

Question 7 of 191



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Dashboard

Overall score: **0%**
1 -

□ Question 8 of 191



A 49-year-old man was brought in by ambulance after he had a prolonged tonic-clonic seizure for 45 minutes. He had no previous history of seizures, and this episode was witnessed by people passing by, who claimed he was jerking throughout his body and wet himself during the course of the fit. On admission, he was postictal after. His seizures stopped after administration of rectal diazepam, phenytoin infusion and intubation, and he was admitted to the intensive care unit. He remained drowsy and lethargic for the next 2 days, and attempts to wean him off the ventilator was slow.

His blood results on day 2 showed:

Na ⁺	140 mmol/l
K ⁺	5.8 mmol/l
Urea	11.1 mmol/l
Creatinine	180 µmol/l
Serum corrected calcium	2.15 mmol/l
Serum bilirubin	21 µmol/l
Serum alkaline phosphatase	97 IU/l
Serum aspartate aminotransferase	62 IU/l
Creatine kinase (CK)	9000 IU/l
Serum lactate	4.5 mmol/l
C-Reactive protein (CRP)	5 mg/l
Haemoglobin	13.6 g/dl
White cell count	7.2 x 10 ⁹ /L
INR	1.0

Which of the following values would likely be seen on his arterial blood gas result?

	pH 7.25 pO2 16 kPa pCO2 4.6 kPa HCO3 11mmol/l BE -10mmol/l, Cl- 101mmol/l
	pH 7.46 pO2 16 kPa pCO2 2.4 kPa HCO3 31mmol/l BE 5mmol/l, Cl- 101mmol/l
	pH 7.29 pO2 15 kPa pCO2 6.6 kPa HCO3 36mmol/l BE 6mmol/l Cl- 111mmol/l
	pH 7.48 pO2 17 kPa pCO2 6.4 kPa HCO3 11mmol/l BE -10mmol/l, Cl- 101mmol/l
	pH 7.36 pO2 17 kPa pCO2 4.6 kPa HCO3 27mmol/l BE -2mmol/l , Cl- 101mmol/l

Dashboard

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1 -

□ Question 8 of 191



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Dashboard

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1 -

□ Question 9 of 191



A 19-year-old woman comes to the endocrine clinic for review. She has problems with hirsutism and irregular periods, and troublesome weight gain. Her GP has just stressed the need to lose weight and offered no pharmacological intervention. She takes no medication from the doctor and is currently studying law. Examination reveals a blood pressure of 135/85 mmHg, pulse is 65 beats per minute and regular. body mass index is 32kg/m². You confirm extensive hirsutism affecting the beard line, upper lip and the nipples. there is acne over the face and the upper chest. Relevant bloods include:

testosterone	4.8 nmol/l (upper limit of normal 2.1 nmol/l)
LH:FSH ratio	2.1
fasting glucose	5.0 mmol/l

Her main concern is hirsutism.

Which of the following is the most appropriate intervention?

	Co-cyprindiol
	Clomiphene
	Levonorgestrel
	Metformin
	Pioglitazone

Dashboard

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Dashboard

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1 -

□ Question 10 of 191



A 45-year-old woman is admitted with hallucinations. She has a long history of alcohol dependency and is being treated by her GP for hypothyroidism. Further questioning of her husband reveals a 3-month history of diarrhoea, difficulty swallowing and an itchy rash on her arms. Prior to this she had been irritable and suffered from regular bouts of vomiting.

The examination is limited as the patient is aggressive . There is a pigmented, scaly rash on her arms and neck. Heart sounds are normal, her chest is clear and her abdomen soft. Neurological examination reveals generalised weakness.

Blood tests show:

Hb	142 g/l
Platelets	200 * 10 ⁹ /l
WBC	5.3 * 10 ⁹ /l

Na ⁺	140 mmol/l
K ⁺	4.2 mmol/l
Urea	6 mmol/l
Creatinine	84 µmol/l

TSH	4.0 U/mL
Free T3	3.1 pg/mL
Free T4	1.5 ng/L

What is the most likely diagnosis?

	Beriberi

	Thyroxine toxicity
	Systemic lupus erythematosus (SLE)
	Pellagra
	Darier's disease

Dashboard

Overall score: **0%**
1 -

□ Question 10 of 191



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Dashboard

Overall score: **0%**
1 -

□ Question 11 of 191



A 28-year-old woman presents to the gastroenterology clinic for review. She has been diagnosed with coeliac disease some 2 years earlier, and has been suffering from severe tiredness, muscle aches and proximal weakness for the past few months. On examination her blood pressure is 112/70 mmHg, pulse is 75 beats per minute and regular. You confirm proximal muscle weakness.

Investigations

Ca ⁺⁺	2.0 mmol/l
Alkaline phosphatase	275 IU/l

Which of the following is the most useful next investigation?

	CK
	Parathyroid hormone
	Vitamin D
	Muscle biopsy
	Electromyography

Dashboard

Overall score: 0%

1 -

□ Question 11 of 191

□ □

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Dashboard

Overall score: **0%**

1 -

□ Question 12 of 191



A 57-year-old man with a history of type 2 diabetes mellitus and chronic heart failure is reviewed in the diabetes clinic. His current medication list is as follows:

metformin 1g bd
gliclazide 160mg bd
ramipril 10mg od
bisoprolol 5mg od
furosemide 40mg od
simvastatin 20mg on

His annual bloods show the following:

Na ⁺	140 mmol/l
K ⁺	3.9 mmol/l
Urea	5.2 mmol/l
Creatinine	78 µmol/l
HbA1c	7.7% (61 mmol/mol)
Total cholesterol	4.2 mmol/l
HDL cholesterol	1.1 mmol/l

Blood pressure today is 124/78 mmHg and body mass index is 29 kg/m².

What is the most appropriate action with regards to his anti-diabetic medication?

	No changes to medication
	Exenatide
	Repaglinide

	Pioglitazone
	Sitagliptin

Dashboard

Overall score: **0%**
1 -

□ Question 12 of 191



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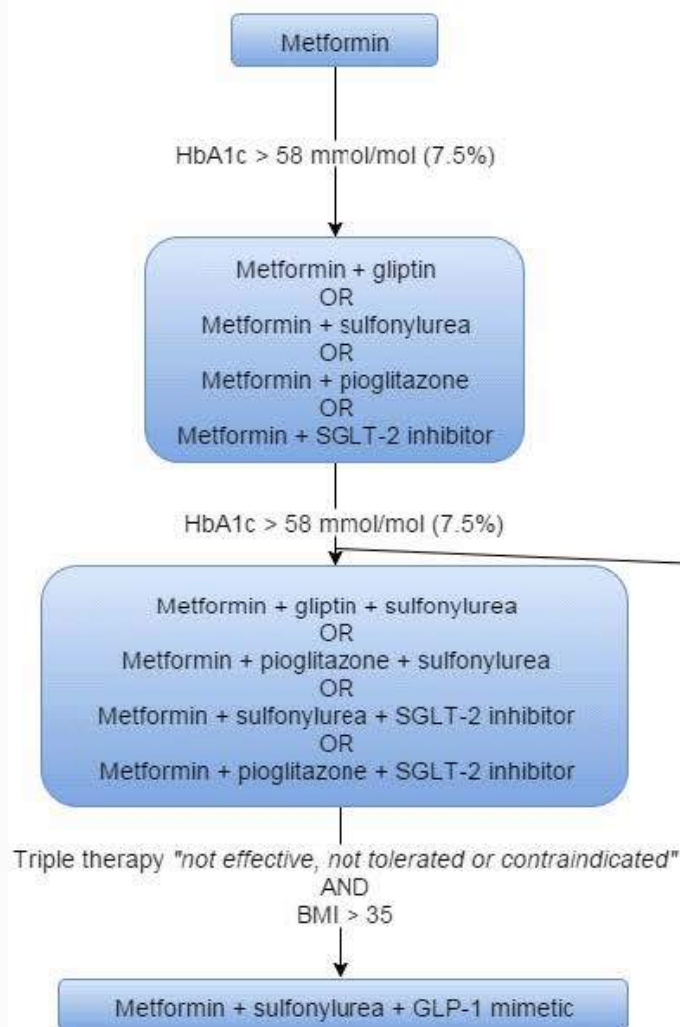
	No changes to medication
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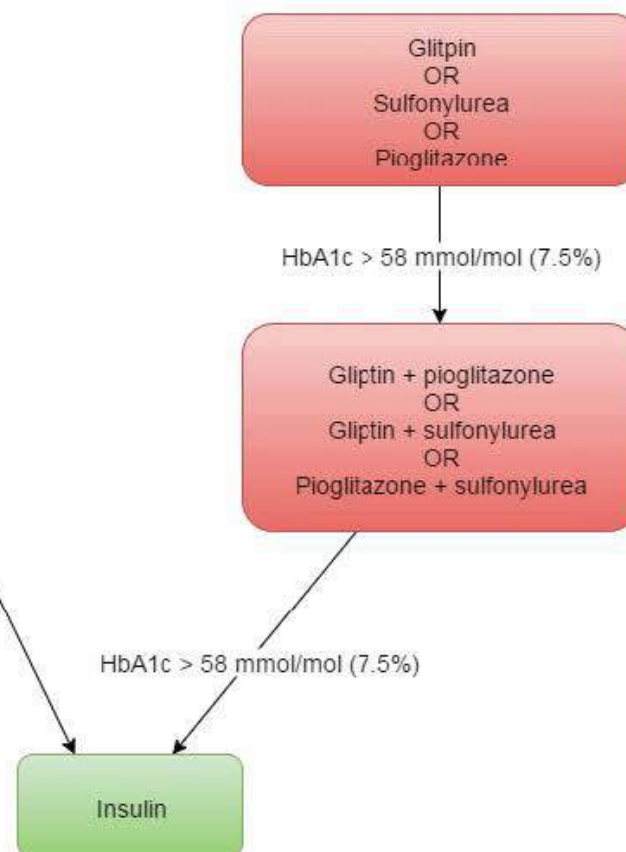
Dashboard

Overall score: **0%**
1 -

Metformin



Metformin not tolerated or CI



Question 12 of 191

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Primary prevention

(10-year cardiovascular risk $\geq 10\%$ OR
most type 1 diabetics OR
CKD if eGFR $< 60\text{ml/min/m}^2$)



Atorvastatin 20mg od

(if non-HDL has not fallen by $\geq 40\%$ then
consider titrating up to 80mg)

	Pioglitazone
	Sitagliptin

Dashboard

Overall score: **0%**
1 -

Question 13 of 191



A 45-year-old gentleman presents to clinic for review. Two weeks ago he presented to the emergency department with renal colic. A spiral CT KUB confirmed nephrolithiasis and he was managed conservatively with IV fluids, analgesia and an alpha-blocker. His symptoms resolved entirely and he was discharged.

Blood tests:

Hb	142 g/l
Platelets	329 * 10 ⁹ /l
WBC	6.6 * 10 ⁹ /l
Na ⁺	141 mmol/l
K ⁺	3.8 mmol/l
Urea	6.2 mmol/l
Creatinine	71 µmol/l
Corrected calcium	2.71 mmol/l
Parathyroid hormone	10.2 pmol/l

Urine tests (24-hour collection):

Urinary calcium	183 mg
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How should he be further managed?

	Annual monitoring of calcium and renal function
	Encourage oral fluids
	Bisphosphonates
	Vitamin D supplementation

	Parathyroidectomy
--	-------------------

Dashboard

Overall score: **0%**

1 -

□ Question 13 of 191



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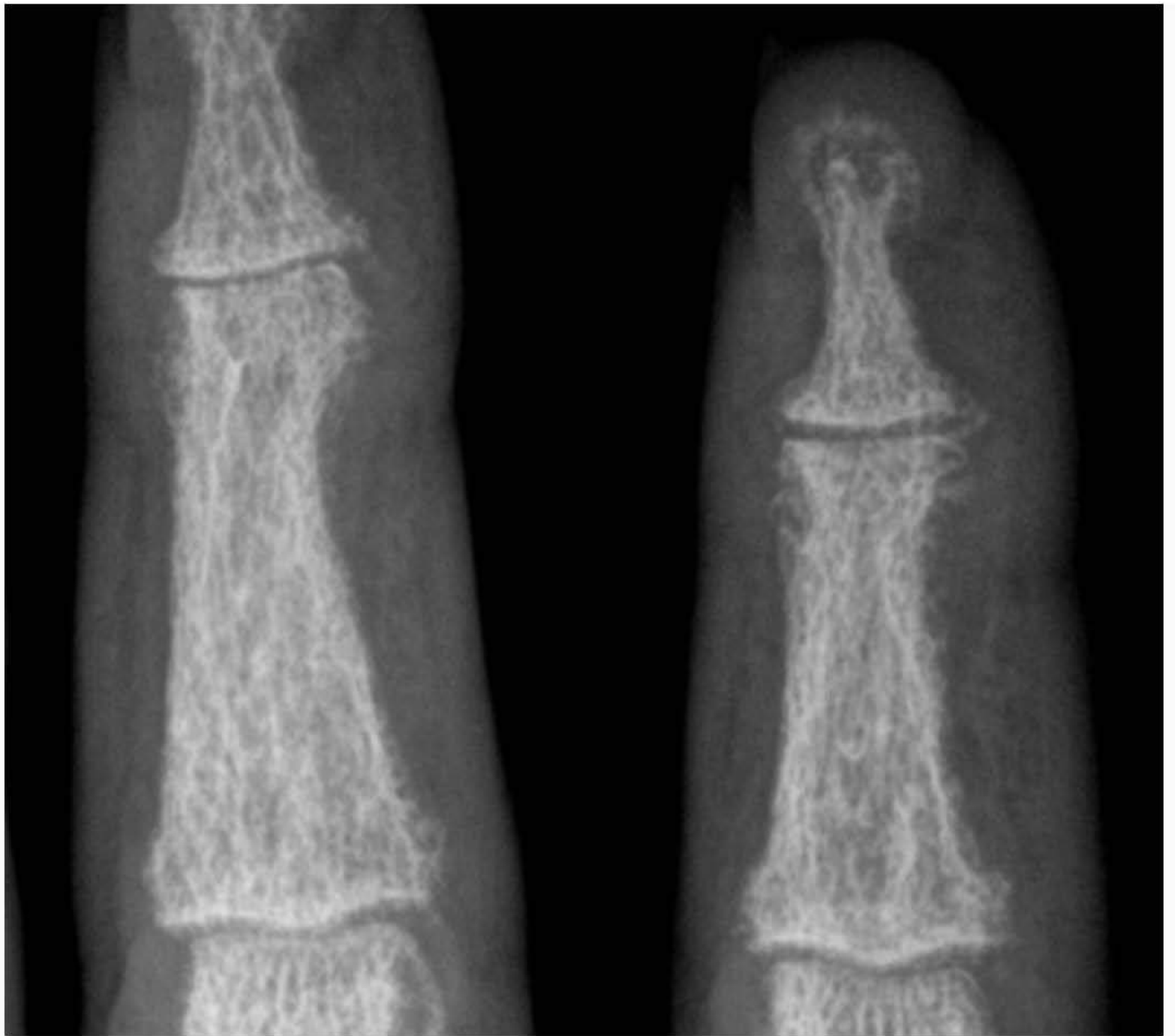
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	Encourage oral fluids
	Bisphosphonates
	Vitamin D supplementation

Dashboard

Overall score: **0%**

1 -





Question 14 of 191

□ □

A 34 year old man is admitted under the medics from the emergency department with central abdominal pain and vomiting not responding to IV morphine. He had been seen by the surgeons earlier in the day as an acute abdomen, but the CT scan they did of his abdomen and pelvis revealed no abnormalities, and his bloods suggested no surgical cause of the abdominal pain.

You note that the patient has presented to the emergency department five times in the past two years with similar problems, and no cause has ever been found, with the patient being discharged one or two days later with analgesia.

On examination his abdomen is generally tender with evidence of voluntary guarding. On further examination you note that he has a rash on the back of his hands, neck and cheeks. This rash consists of several small fluid filled bullae.

His past medical history includes depression - for which he is taking citalopram, and one short psychiatric inpatient stay for an episode of psychosis.

What is the most likely diagnosis?

	Erythropoietic protoporphyria
	Porphyria cutanea tarda
	Hereditary coproporphyria
	Acute intermittent porphyria
	Congenital erythropoietic porphyria

Dashboard

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1 -

□ Question 14 of 191



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A 34 year old man is admitted under the medics from the emergency department with central abdominal pain and vomiting not responding to IV morphine. He had been seen by the surgeons earlier in the day as an acute abdomen, but the CT scan they did of his abdomen and pelvis revealed no abnormalities, and his bloods suggested no surgical cause of the abdominal pain.

You note that the patient has presented to the emergency department five times in the past two years with similar problems, and no cause has ever been found, with the patient being discharged one or two days later with analgesia.

On examination his abdomen is generally tender with evidence of voluntary guarding. On further examination you note that he has a rash on the back of his hands, neck and cheeks. This rash consists of several small fluid filled bullae.

His past medical history includes depression - for which he is taking citalopram, and one short psychiatric inpatient stay for an episode of psychosis.

What is the most likely diagnosis?

	Erythropoietic protoporphyria
	Porphyria cutanea tarda
	Hereditary coproporphyria
	Acute intermittent porphyria
	Congenital erythropoietic porphyria

Dashboard

Overall score: **0%**

1 -

Mitochondria

Cytosol

Glycine + succinyl-CoA

Sideroblastic anemia

ALA synthase

δ -aminolevulinic acid

Lead poisoning

ALA dehydratase

Porphobilinogen

Porphobilinogen deaminase

AIP

Hydroxymethylbilane

Uroporphyrinogen III

Uroporphyrinogen decarboxylase

PCT

Coproporphyrinogen III

Protoporphyrin

Fe^{2+}

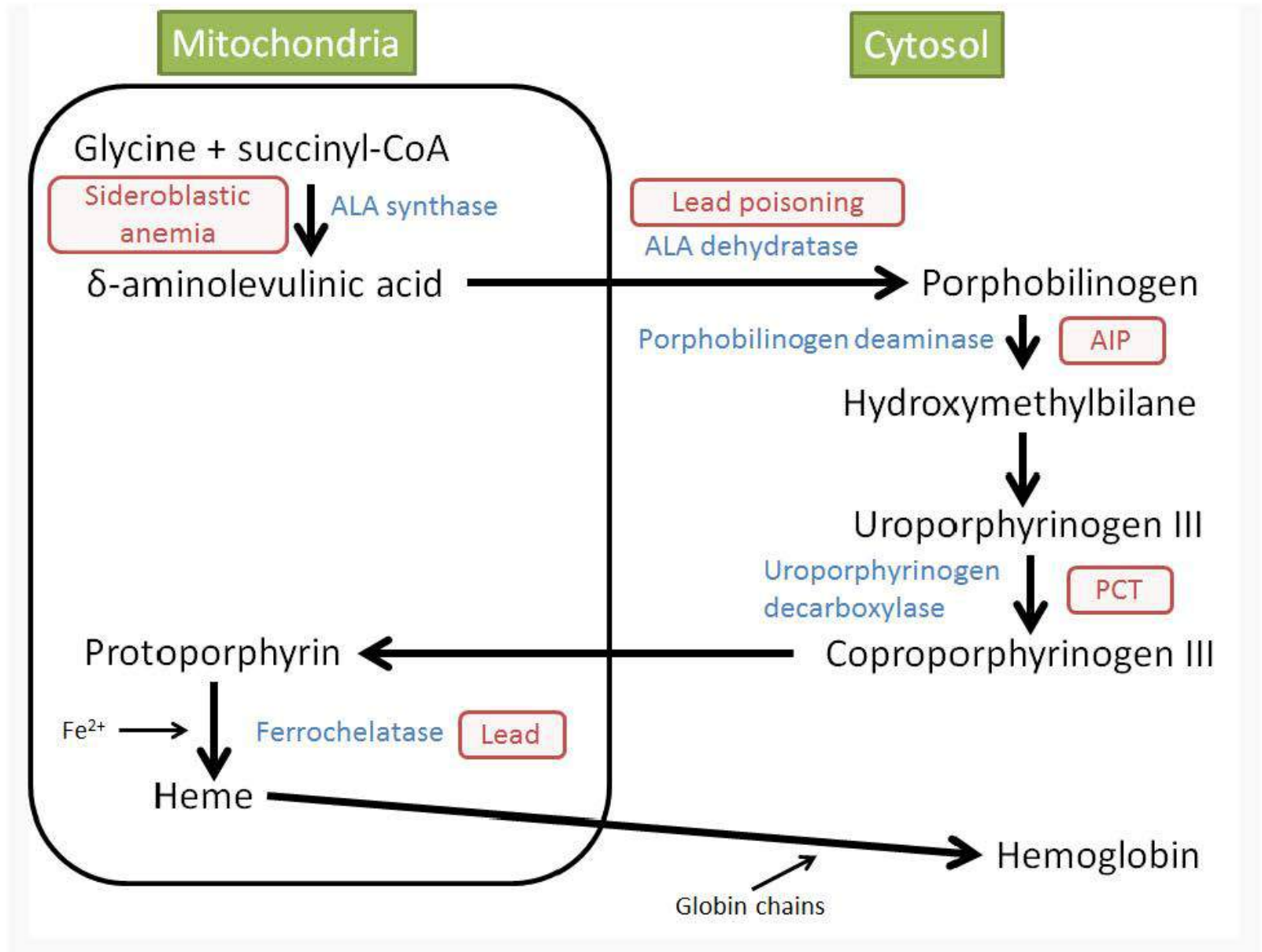
Ferrochelatase

Lead

Heme

Hemoglobin

Globin chains



Question 15 of 191

□ □

A surgical Foundation Year 1 doctor (FY1) asks you to review a preoperative ECG for a 19-year-old patient who has been admitted under their team with suspected appendicitis. The only abnormality is a prolonged QT and you note the adjusted calcium to be 2.02 mmol/l.

The FY1 tells you that when they looked at the patient's closed fists the outer two knuckles looked like dimples. She also tells you that the patient's body mass index is 29 kg/m².

You ask her to order some blood tests which come back as follows:

Adjusted calcium	2.02 mmol/l
PTH	69 pmol/L (normal range = 0.8 - 8.5)
Phosphate	2.0 mmol/l
ALP	130 u/l

What is the most likely underlying cause for this patient's hypocalcaemia?

	Hypoparathyroidism
	Pseudohypoparathyroidism type 1a
	Pseudohypoparathyroidism type 1b
	Pseudopseudohypoparathyroidism
	Secondary hyperparathyroidism

Question 15 of 191

□ □

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	Pseudohypoparathyroidism type 1a
	Pseudohypoparathyroidism type 1b
	Pseudopseudohypoparathyroidism
	Secondary hyperparathyroidism

□ Question 16 of 191



A 32-year-old female presents to the infertility clinic with an inability to conceive. She is overweight, with a body-mass index of 32 kg/m², and has noticed increased hair growth over her face and chest over the last 12 months. Her periods are irregular and she has also noticed a deepening of her voice. An ultrasound of the pelvis has revealed the presence of multiple cysts in both ovaries. She has been treated with cyproterone acetate for her hirsutism but was informed that she should not attempt conception whilst on the drug. She now wishes to conceive.

On examination, she has a cushingoid appearance, with abdominal striae and her blood pressure is 140/85 mmHg.

Laboratory investigations reveal:

9:00 am Cortisol	710 nmol/l (170 700 nmol/l)
LH	28 iU/l (1 20 iU/l)
Basal FSH	4.7 iU/l (1.0 8.8 iU/l)
DHEAS	509 µg/dl (31 228 µg/dl)
Prolactin	602 mU/l (<360 mU/l)
17 OH Progesterone	54 ng/dl (<80 ng/dl)

Which of the following treatment options would be most appropriate for the treatment of infertility?

	Metformin
	Spironolactone
	Reverse circadian rhythm steroids
	Clomiphene citrate
	Cabergoline

□ Question 16 of 191



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Which of the following treatment options would be most appropriate for the treatment of infertility?

	Metformin
	Spironolactone
	Reverse circadian rhythm steroids
	Clomiphene citrate
	Cabergoline

□ Question 17 of 191

□ □

A 34-year-old woman is reviewed in clinic. She has been suffering from increasing tiredness for the last three months. She has no other symptoms and specifically denies pain, bleeding, weight loss and mood problems. She has a past medical history of asthma but has not needed her blue inhaler in over a year. She has no allergies. Her only regular medication is the oral contraceptive pill. Blood tests show a normal FBC, U&Es, calcium, parathyroid hormone but low vitamin D (32 nmol/L). What is the most appropriate treatment in regards to her low vitamin D?

	Dietary advise only
	Loading dose vitamin D
	Maintenance dose vitamin D
	Combined calcium and vitamin D
	No treatment needed

Dashboard

Overall score: 0%

1 -

□ Question 17 of 191

□ □

A 34-year-old woman is reviewed in clinic. She has been suffering from increasing tiredness for the last three months. She has no other symptoms and specifically denies pain, bleeding, weight loss and mood problems. She has a past medical history of asthma but has not needed her blue inhaler in over a year. She has no allergies. Her only regular medication is the oral contraceptive pill. Blood tests show a normal FBC, U&Es, calcium, parathyroid hormone but low vitamin D (32 nmol/L). What is the most appropriate treatment in regards to her low vitamin D?

	Dietary advise only
	Loading dose vitamin D
	Maintenance dose vitamin D
	Combined calcium and vitamin D
	No treatment needed

Dashboard

Overall score: **0%****1** -

□ Question 18 of 191



A 56-year-old man with a history of type 2 diabetes managed with Humalog mix 30 and metformin 1g BD comes to the clinic for review. HbA1c is currently 57. He has troublesome hypoglycaemia episodes in the late afternoon and early mornings and wants to know what to do about it. On examination his blood pressure is 132/82 mmHg, his pulse is 72 beats per minute and regular. His body mass index is 32 kg/m².

Investigations

Na ⁺	139 mmol/l
K ⁺	4.9 mmol/l
Urea	5.1 mmol/l
Creatinine	94 µmol/l
HbA1c	57 mmol/mol

Which of the following is the most appropriate next step in his management?

	Continue current regimen, eat a snack mid afternoon and before bed time
	Reduce the dose of metformin
	Reduce the dose of mixed insulin
	Switch to a basal bolus regimen
	Switch to Humalog mix 20

Dashboard

Overall score: 0%

□ Question 18 of 191



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	Reduce the dose of metformin
	Reduce the dose of mixed insulin
	Switch to a basal bolus regimen
	Switch to Humalog mix 20

Dashboard

Overall score: **0%**

Question 19 of 191

□ □

A 64-year-old man is reviewed in clinic. He has a history of ischaemic heart disease and was diagnosed with type 2 diabetes mellitus around 12 months ago. At this time of diagnosis his HbA1c was 7.6% (60 mmol/mol) and he was started on metformin which was titrated up to a dose of 1g bd. The most recent bloods show a HbA1c of 6.8% (51 mmol/mol). He has just retired from working in the IT industry and his body mass index (BMI) today is 28 kg/m². His other medication is as follows:

Atorvastatin 80mg on
Aspirin 75mg od
Bisoprolol 2.5 mg od
Ramipril 5mg od

What is the most appropriate next step?

	Add sitagliptin
	Make no changes to his medication
	Add glimepiride
	Add pioglitazone
	Add exenatide

Dashboard

Overall score: 0%

1 -

□ Question 19 of 191

□ □

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Dashboard

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1 -

Question 19 of 191

□ □

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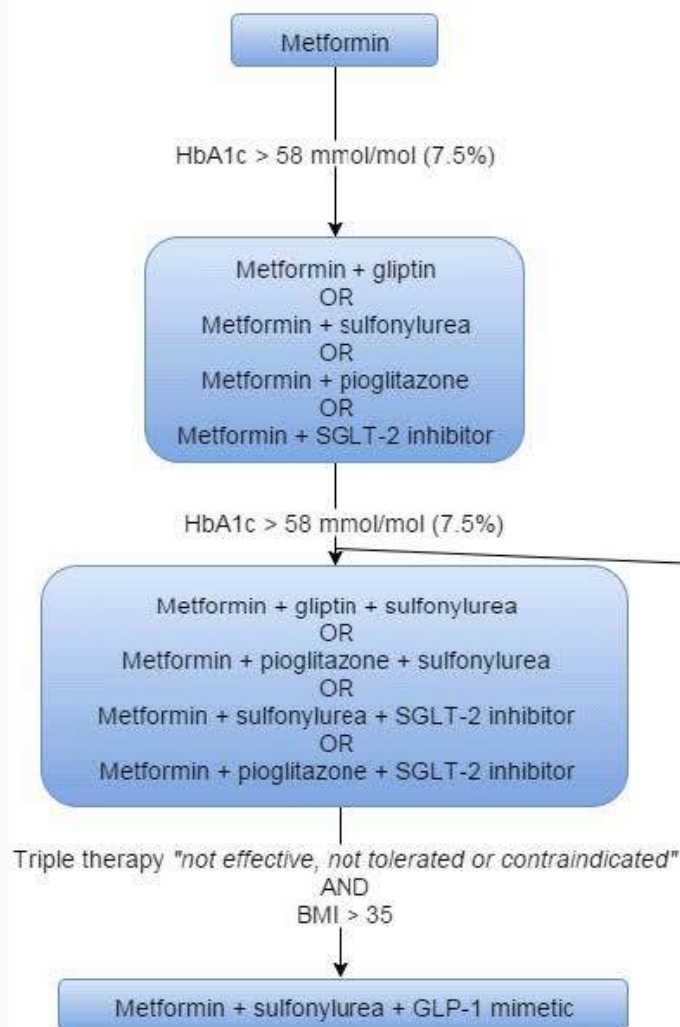
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	Make no changes to his medication
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Dashboard

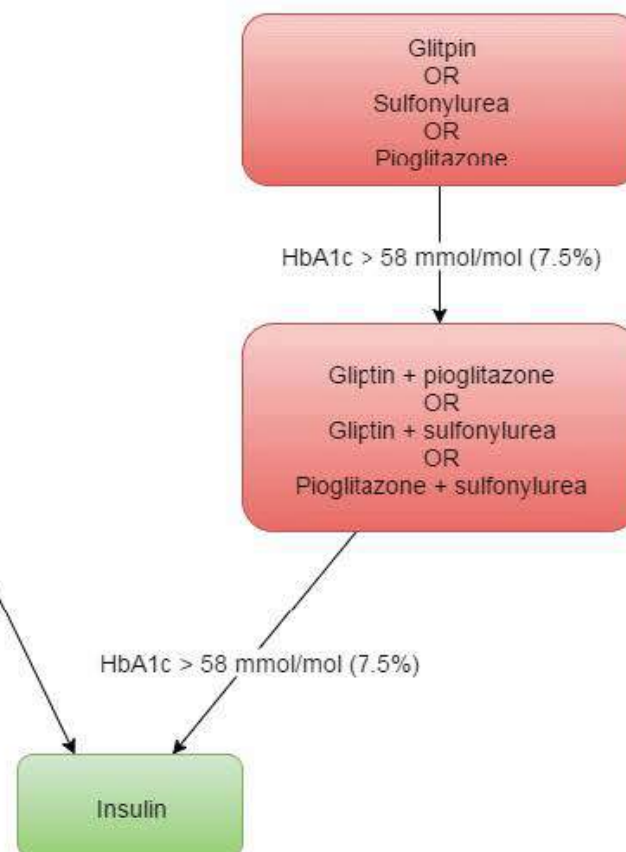
Overall score: 0%

1 -

Metformin



Metformin not tolerated or CI

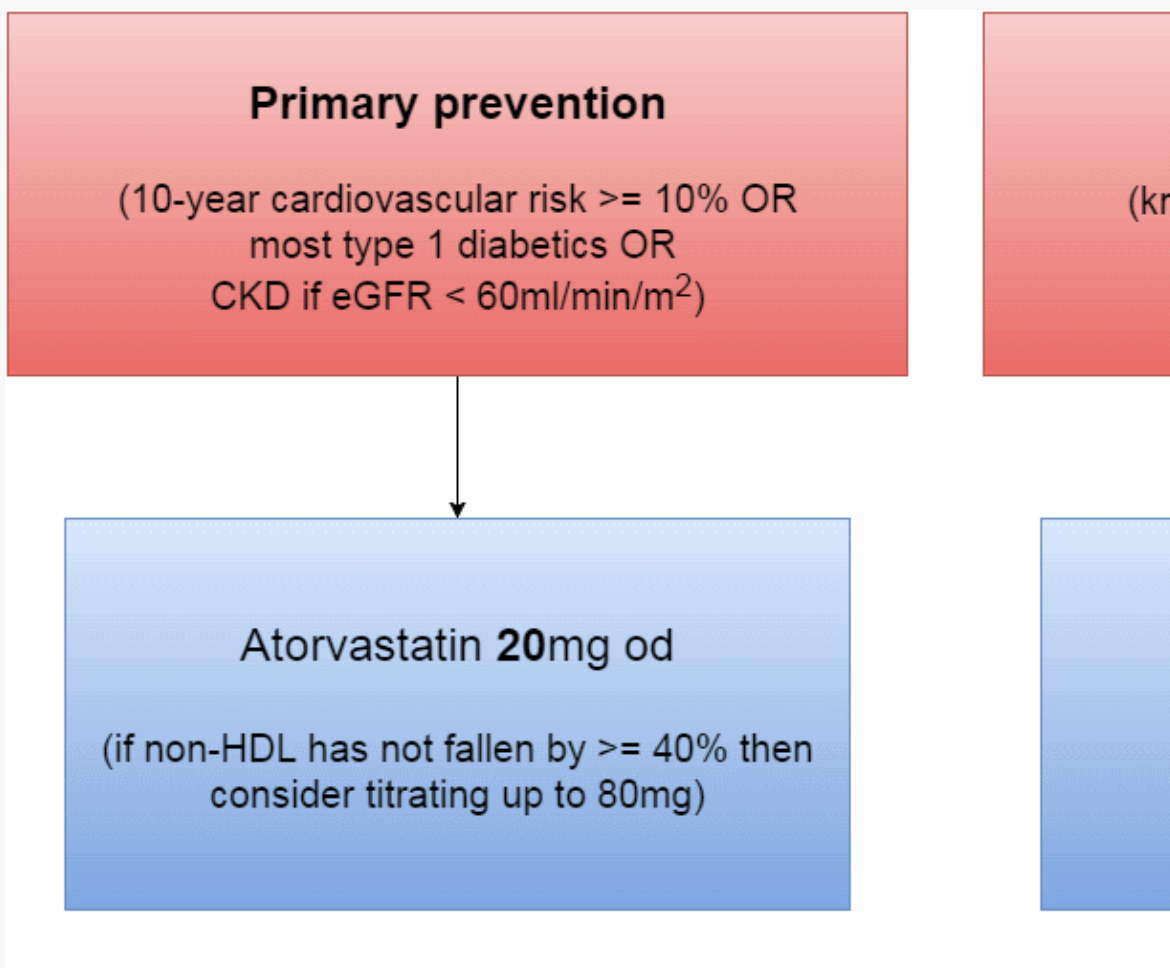


Question 19 of 191

A 64-year-old man is reviewed for diabetes mellitus around 12 years after he started on metformin which has been well controlled (HbA1c 5.8 mmol/mol). He has just retired and his other medication is as follows:

Atorvastatin 80mg on alternate days
Aspirin 75mg od
Bisoprolol 2.5 mg od
Ramipril 5mg od

What is the most appropriate management?



Add sitagliptin

Make no changes to his medication

Add glimepiride

Add pioglitazone

Add exenatide

Dashboard

Overall score: **0%**

1 -

Question 20 of 191

□ □

A 50-year-old woman with a history of Grave's disease is reviewed on the surgical ward some 12hrs after parathyroidectomy. She has begun suffering from episodes of carpopedal spasm and pins and needles affecting both hands and around her mouth. On examination on the ward, her blood pressure is 115/72 mmHg, and pulse is 88 beats per minute. Her serum calcium is measured at 1.85 mmol/l.

Which of the following is the most appropriate intervention?

	Intravenous diazepam
	Intravenous calcium
	Intravenous magnesium
	Oral calcium
	Oral vitamin D

Dashboard

Overall score: 0%

1 -

Question 20 of 191

□ □

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Which of the following is the most appropriate intervention?

	Intravenous diazepam
	Intravenous calcium
	Intravenous magnesium
	Oral calcium
	Oral vitamin D

Dashboard

Overall score: **0%**

1 -

□ Question 21 of 191



You are seeing a 50-year-old lady with type 2 diabetes mellitus in the outpatient clinic. She has a past medical history of gastritis, moderate left ventricular dysfunction and chronic obstructive pulmonary disease. She is currently on metformin and gliclazide. Since last review she has gained 5kg in weight and her HbA1c has deteriorated to 70 mmol/mol from 62 mmol/mol. Body mass index today in clinic is 33 kg/m².

Recent blood tests are as follows:

Na ⁺	141 mmol/l
K ⁺	3.9 mmol/l
Urea	6 mmol/l
Creatinine	140 µmol/l

She was unable to previously tolerate liraglutide due to nausea and vomiting. What would be the best alteration to her therapy?

	Empagliflozin (SGLT-2 inhibitor)
	Add insulin
	Add pioglitazone
	Increase dose of metformin
	Increase dose of gliclazide

Dashboard

Overall score: 0%

□ Question 21 of 191



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Dashboard

Overall score: **0%**

Question 21 of 191



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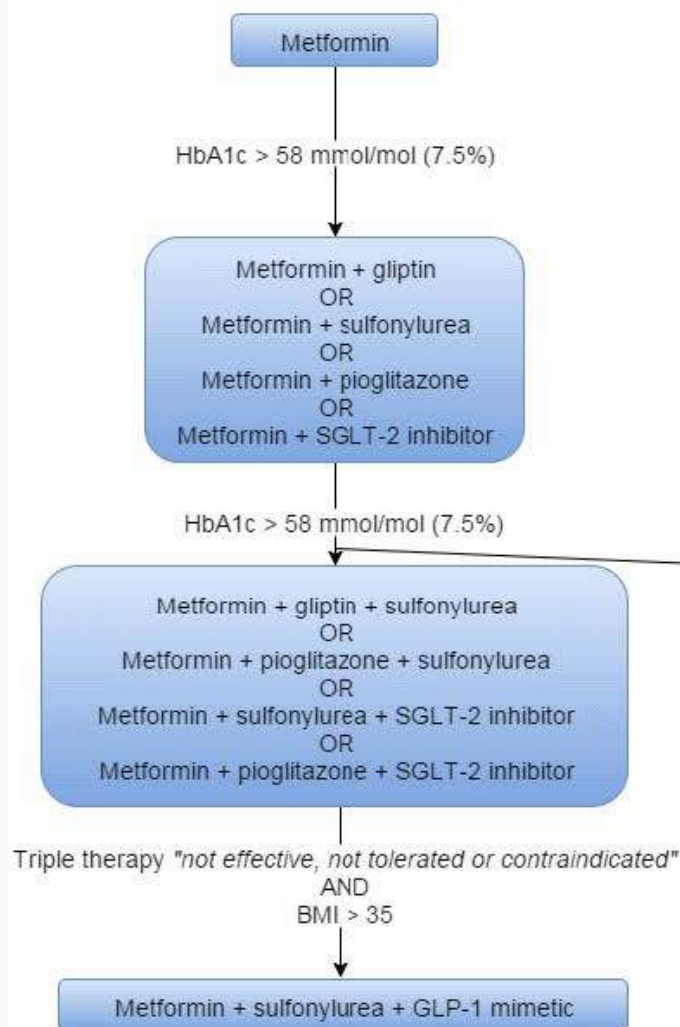
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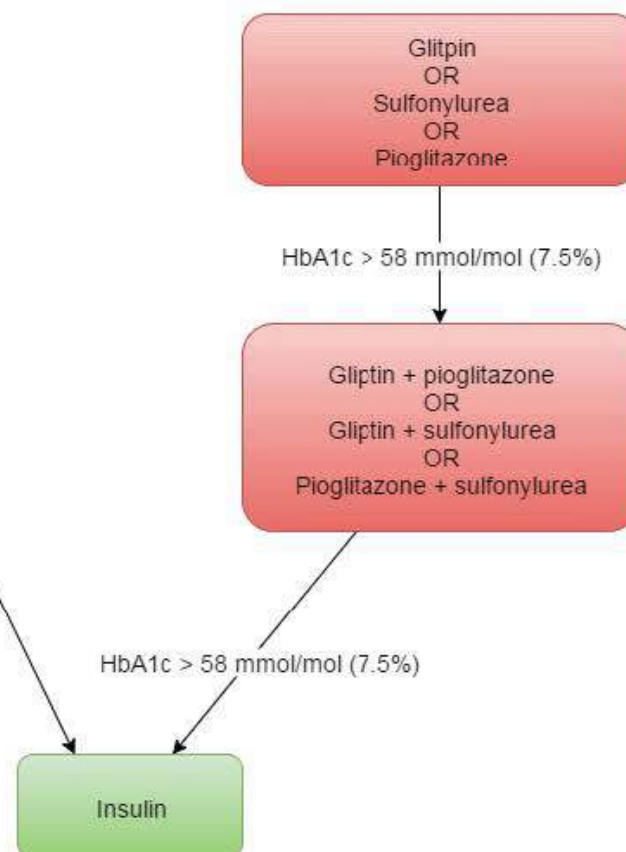
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	Add insulin
	Add pioglitazone
	Increase dose of metformin
	Increase dose of gliclazide

Metformin



Metformin not tolerated or CI



Question 21 of 191

You are seeing a 50-year-old female with type 2 diabetes, chronic gastritis, moderate left ventricular hypertrophy, and gliclazide. Since last review, her HbA1c has risen to 8.5 mmol/mol. Body mass index is 32 kg/m².

Recent blood tests are as follows:

Na ⁺	141 mmol/l
K ⁺	3.9 mmol/l
Urea	6 mmol/l
Creatinine	140 µmol/l

Primary prevention

(10-year cardiovascular risk $\geq 10\%$ OR
most type 1 diabetics OR
CKD if eGFR $< 60\text{ml/min/m}^2$)

**Atorvastatin 20mg od**

(if non-HDL has not fallen by $\geq 40\%$ then
consider titrating up to 80mg)

She was unable to previously tolerate liraglutide due to nausea and vomiting. What would be the best alteration to her therapy?

	Empagliflozin (SGLT-2 inhibitor)
	Add insulin
	Add pioglitazone
	Increase dose of metformin
	Increase dose of gliclazide

Dashboard

Overall score: **0%**

Question 22 of 191

□ □

A 45-year-old man presents to the endocrine clinic for review. He has had 3 stones in weight gain over the past 6 months and his GP is concerned about a possible diagnosis of Cushing's syndrome and has checked an initial 24hr urinary free cortisol which is elevated. He is hypertensive with a blood pressure of 155/90 mmHg, his pulse is 75 beats per minute and regular. His body mass index is 35 kg/m² and there are obvious abdominal striae. Which of the following would be most suggestive of an adrenal adenoma producing cortisol?

	Normal 9am serum cortisol
	Raised urinary free cortisol on repeat testing
	Serum cortisol of 220 mmol/l at 9am after an overnight dexamethasone suppression test
	Serum potassium of 2.4 mmol/l
	Undetectable levels of ACTH

Dashboard

Overall score: 0%

1 -

Question 22 of 191

□ □

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Dashboard

Overall score: **0%**

1 -

□ Question 23 of 191



A 58-year-old man is referred to metabolic medicine clinic by his urologist. The patient has been unfortunate enough to suffer from repeated episodes of renal stones over the past few years.

The initial presentation was of multiple attacks of right sided ureteric colic with presence of renal calculi demonstrated on ultrasound. At this initial presentation, the patient's stones had passed spontaneously. The patient reported that since his initial symptoms he had been very careful to maintain his hydration level, going so far as to carry a large water bottle with him at all times.

Two months previously, a new episode of left sided ureteric colic had started. Abdominal CT scanning had shown multiple left and right sided renal calculi with left sided hydronephrosis and hydroureter. The patient had undergone lithotripsy and an ureteric stent had been sited to relieve the obstruction. The stent had been removed after six weeks and a retained renal calculi sent to the laboratory for analysis.

The patient had an otherwise fairly limited past medical history, reporting only a previous diagnosis of hypercholesterolaemia and a previous appendicectomy. His only regular medication was simvastatin 40 mg daily. The patient lived with his wife and worked full time as a bus driver.

While the patient was currently free of symptoms, he was keen to consider any further interventions that would reduce his risk of suffering from recurrent attacks in the future. Results of investigations organised following clinic review are given below.

Urea	7.3 mmol / L
Creatinine	95 micromol / L
Sodium	137 mmol / L
Potassium	4.7 mmol / L
Parathyroid hormone	5.1 pmol/L (reference: 1.6-6.9)
Urinary calcium (24 hour collection)	11.6 mmol / 24 hours (reference: 2.5-8.6)
Urinary sodium (24 hour collection)	156 mmol / 24 hours (reference 40-220)
Urinary uric acid (24hour collection)	2.5 mmol / 24 hours (reference: < 4.8)

What is the correct management to reduce the patient's risk of recurrent renal stones?

	Chlorthalidone
	Allopurinol
	Acetohydroxamic acid
	Bumetanide
	Sodium bicarbonate

Dashboard

Overall score: **0%**

1 -

□ Question 23 of 191



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What is the correct management to reduce the patient's risk of recurrent renal stones?

	Chlorthalidone
	Allopurinol
	Acetohydroxamic acid
	Bumetanide
	Sodium bicarbonate

Dashboard

Overall score: **0%**

1 -

Question 24 of 191

□ □

You are asked to review a 67-year-old man who is currently an inpatient on a surgical ward with new paraesthesia in his fingers. He was admitted for an elective parathyroidectomy three days ago for fairly long standing hyperparathyroidism and subsequent hypercalcaemia. He had a single parathyroid adenoma excised which had been identified on pre-operative MIBI scanning. The procedure was without complications but he is now complaining of a tingling sensation in his fingers that he first noticed about twelve hours ago. He also complains of new severe pain in both of his ankles which is worse when he walks, but also present at rest. The surgical SHO has already arranged x-rays of the patient's ankles and these reveal multiple osteolytic lesions which have been reported as being suspicious for metastatic disease. He is otherwise fit and well and his only regular medications are paracetamol, tramadol and prophylactic dalteparin. His blood tests are as follows.

Adjusted Calcium	1.84 mmol/L
Magnesium	0.7 mmol/L

What is the most likely explanation for his current symptoms?

<input type="checkbox"/>	Metastatic parathyroid cancer
<input type="checkbox"/>	Secondary hyperparathyroidism
<input type="checkbox"/>	Hypomagnesaemia
<input type="checkbox"/>	Hungry bone syndrome
<input type="checkbox"/>	Secondary hypoparathyroidism

Dashboard

Overall score: 0%

1 -

□ Question 24 of 191

□ □

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Adjusted Calcium	1.84 mmol/L
Magnesium	0.7 mmol/L

What is the most likely explanation for his current symptoms?

	Metastatic parathyroid cancer
	Secondary hyperparathyroidism
	Hypomagnesaemia
	Hungry bone syndrome
	Secondary hypoparathyroidism

Dashboard

Overall score: 0%

1 -

Question 25 of 191



A 40-year-old woman found a neck lump that was palpable in the left lobe of her thyroid gland. She was clinically euthyroid.

TSH	3.6 (NR 0.4-5.0)
free T4	15.1 (NR 10-25)
corrected calcium	2.41 (NR 2.2-2.6)

USS: 1.7 x 1.6cm solid lesion in left lobe of thyroid with microcalcification.

What is the next step in management?

	Fine needles aspiration cytology
	Radio-iodine uptake scan
	Left lobectomy
	Calcitonin level
	Thyroglobulin level

Dashboard

Overall score: 0%

1 -

Question 25 of 191

□ □

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What is the next step in management?

	Fine needles aspiration cytology
	Radio-iodine uptake scan
	Left lobectomy
	Calcitonin level
	Thyroglobulin level

Dashboard

Overall score: **0%**

1 -

Question 26 of 191

□ □

A 52 year old lady presents complaining of polydipsia and polyuria. She has a background of hypertension, hypercholesterolaemia and bipolar affective disorder and a strong family history of diabetes - she is unsure which type.

Results show the following:

Na+	131mmol/l
urine osmolality	287mOsmol/kg (300 - 900mOsmol/kg)
plasma osmolality	287mOsmol/kg (285 - 295mOsmol/kg)

Which of the following is the most likely explanation for this lady's symptoms?

	Psychogenic polydipsia
	Syndrome of inappropriate anti-diuretic hormone (SIADH)
	Diabetes insipidus
	Diabetes mellitus type 1
	Hyponatraemia

Dashboard

Overall score: 0%

1 -

Question 26 of 191

□ □

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Which of the following is the most likely explanation for this lady's symptoms?

	Psychogenic polydipsia
	Syndrome of inappropriate anti-diuretic hormone (SIADH)
	Diabetes insipidus
	Diabetes mellitus type 1
	Hyponatraemia

Dashboard

Overall score: **0%**

1 -

□ Question 27 of 191



A 30-year-old south Asian woman is admitted to the accident and emergency department with abdominal pain. She is thought to be constipated. Initial blood results with subsequent tests are listed below. Urine is clear and an ECG performed is normal. Examination is unremarkable with no oedema, and blood pressure 105/68 mmHg.

pH	7.250
Bicarbonate	18.0 mmol/l
Base excess	8.0 mmol/l
Anion gap	Normal

Potassium	7.2 mmol/l
Creatinine	56 mmol/l
Glucose	5.3 mmol/l
Thyroid function	Normal
Aldosterone	Normal
Renin	Normal
Protein electrophoresis & immunoglobulins	Normal
Urinary sodium	94 mmol/l (normal range >20 mmol/L)
Urinary potassium	26.8 mmol/l (normal range >25 mmol/L)
17- hydroxyprogesterone	Normal
Short synacthin test (basal)	320 nmol/l
Short synacthin test (30 mins)	750 nmol/l

What is the likely diagnosis?

	Renal tubular acidosis type 1
	Renal tubular acidosis type 2
	Renal tubular acidosis type 4
	Gitelman syndrome
	Adrenal insufficiency

Dashboard

Overall score: **0%**
1 -

□ Question 27 of 191



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1 -

Question 27 of 191



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Dashboard

Overall score: 0%

1 -



Question 28 of 191

□ □

You are reviewing a 57 year-old gentleman in the diabetes outpatient clinic. He has type 2 diabetes mellitus and is currently taking metformin 850mg three times a day and gliclazide 80mg once daily.

On further questioning he admits having frequent hypoglycaemic episodes at night that distress him as he lives alone. His BMI is calculated at 30.3 kg/m², HbA1c 7.8% (62 mmol/mol) and his co-morbidities include congestive cardiac failure.

How would you change his diabetic treatment?

	Stop gliclazide, start insulin
	Add exenatide
	Add sitagliptin to current regimen
	Stop gliclazide, start pioglitazone
	Stop gliclazide, start sitagliptin

Dashboard

Overall score: 0%

1 -

Question 28 of 191

□ □

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Overall score: **0%**

1 -

□ Question 28 of 191

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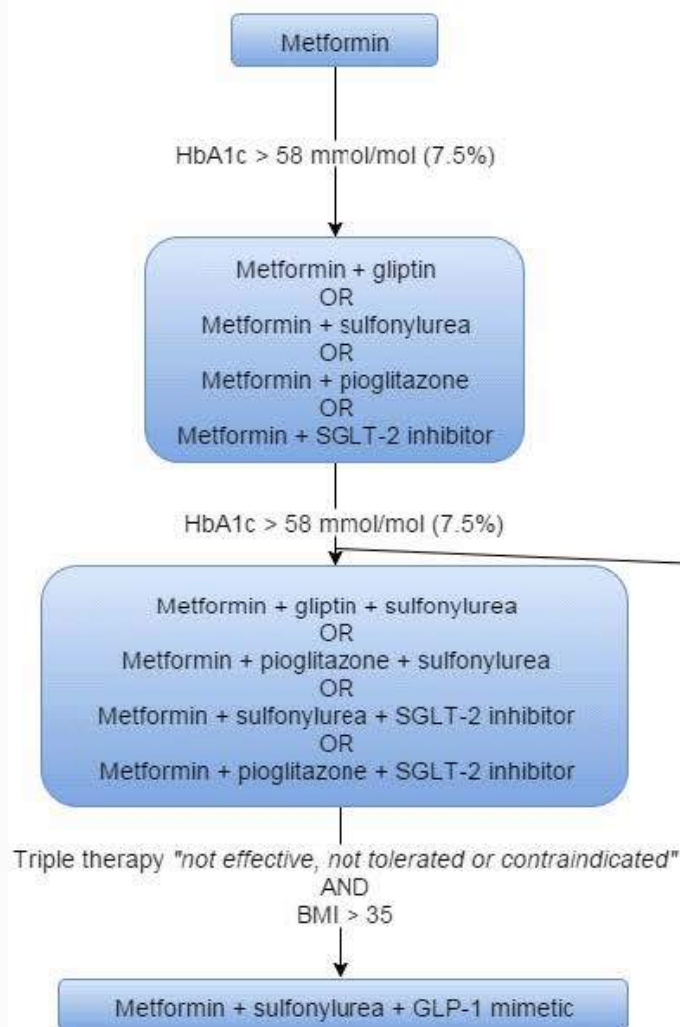
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Dashboard

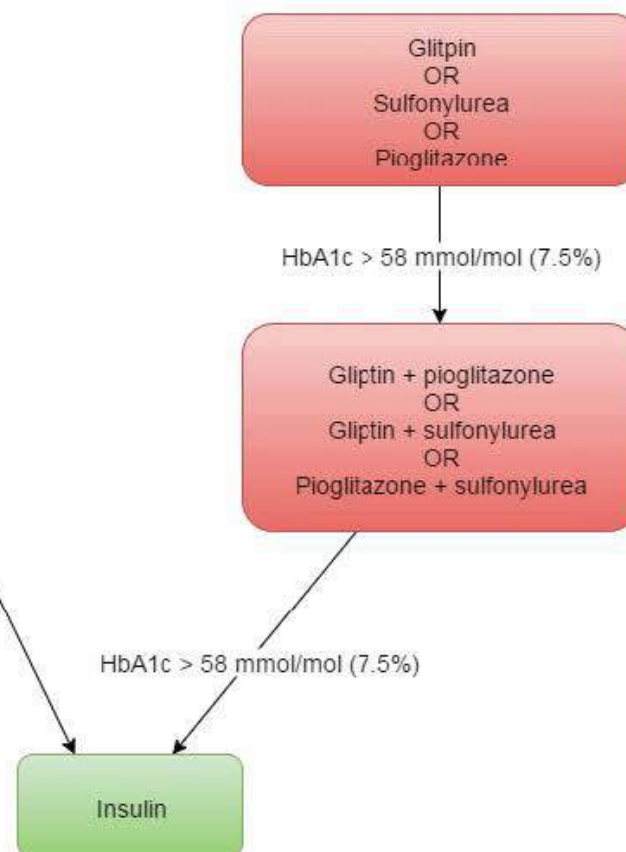
Overall score: 0%

1 -

Metformin



Metformin not tolerated or CI

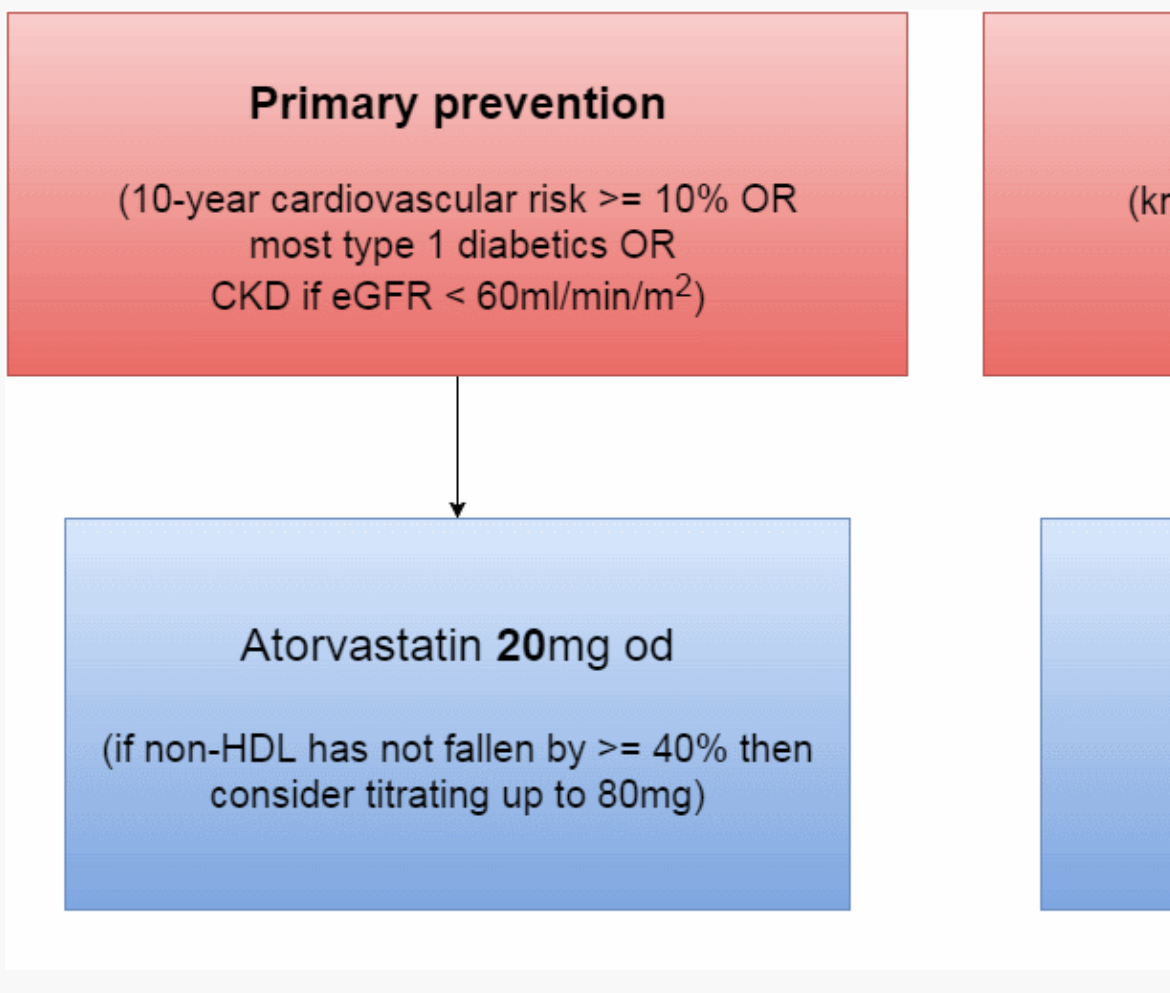


Question 28 of 191

You are reviewing a 57 year old male with type 2 diabetes who is currently taking metformin 850mg bd.

On further questioning he also has a history of heart failure. His BMI is calculated at 30.3 kg/m².

How would you change his treatment?



	Stop gliclazide, start pioglitazone
	Add exenatide
	Add sitagliptin to current regimen
	Stop gliclazide, start pioglitazone
	Stop gliclazide, start sitagliptin

Dashboard

Overall score: **0%**

1 -

□ Question 29 of 191



45 year old female presents with a 2 year history of headache and visual blurring. When initially presenting to her GP 2 years ago, her blood pressure was found to be 235/160mmHg. Subsequently, despite maximal doses of four anti-hypertensives, including 50mg spironolactone, her blood pressure remains poorly controlled. Her latest blood tests demonstrate the following:

Na ⁺	140 mmol/l
K ⁺	2.9 mmol/l
Urea	5.8 mmol/l
Creatinine	78 µmol/l
CRP	2 mg/l

Serum ambulatory renin activity	0.34 pmol/L @ 3-4 hours (normal range 0.8-3.5 pmol/ml/hr)
Serum ambulatory aldosterone	2052 pmol/L@ 3-4 hours (normal range 100-800)

A CT adrenal reveal a right adrenal mass of 2.5cm diameter. The patient is keen to take away the underlying problem. What is the most appropriate next management step?

	Add amiloride
	Add eplerenone
	Increase spironolactone to 100mg OD
	Adrenal vein sampling
	Right adrenalectomy

□ Question 29 of 191

□ □

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□ Question 29 of 191



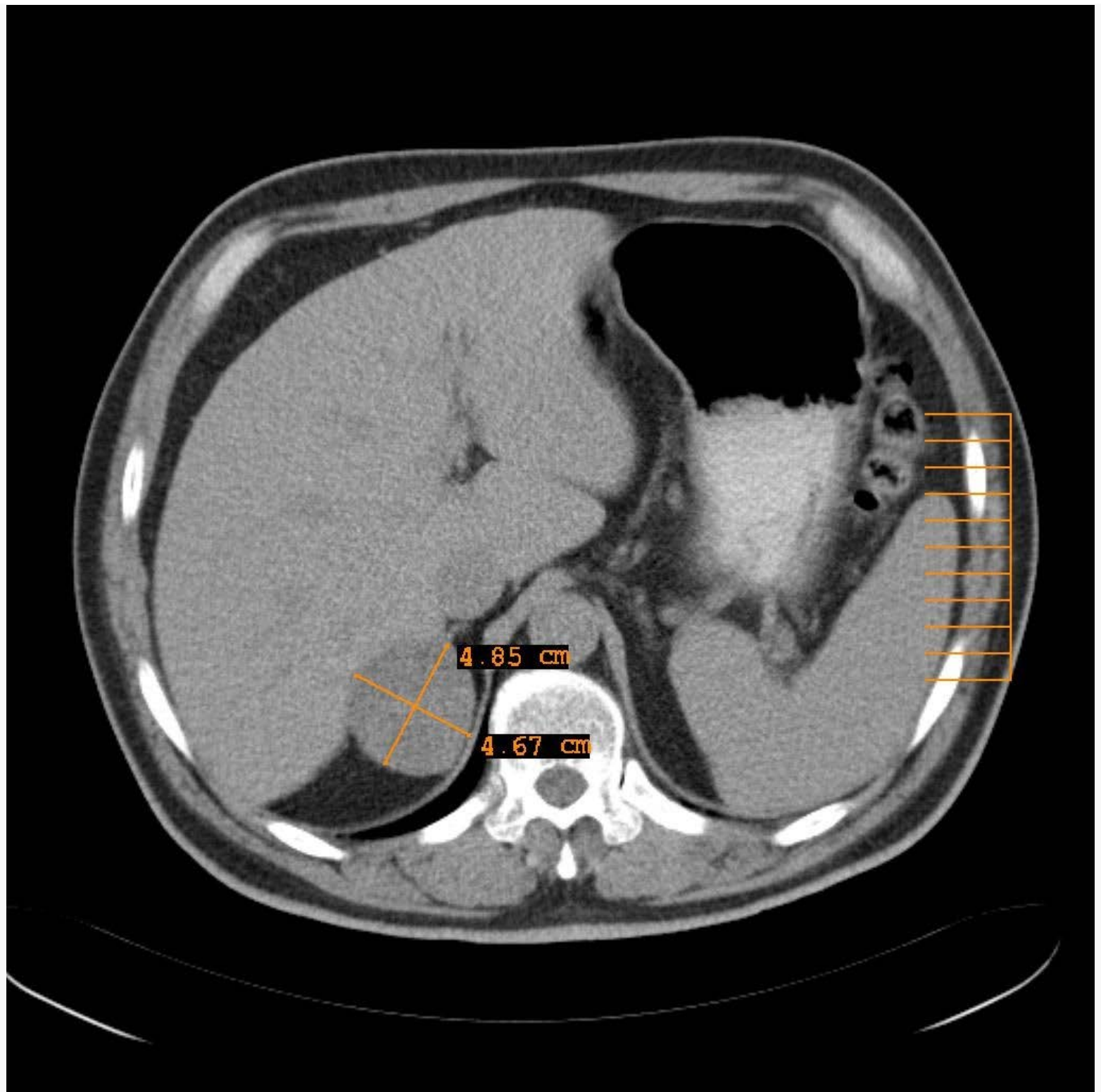
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	Right adrenalectomy



Question 30 of 191

□ □

A 24-year-old nurse presents after collapsing on a night shift. His blood glucose is measured at being 1.4 mmol/l. His blood pressure at the time was noted to be 115/82 mmHg. He has no palpitations and had not bitten his tongue or become incontinent during the episodes. He was shaken afterwards, although did not have memory loss and stated he had not tripped over anything. He also said he has had five of these episodes over the last two weeks.

Blood tests are sent off and unremarkable except for a low-normal C-peptide level and markedly raised insulin level.

Which of the following is the most likely diagnosis of his multiple episodes of collapse?

	Sulphonylurea misuse
	Insulin misuse
	Alcohol misuse
	Retroperitoneal sarcoma
	Insulinoma

Dashboard

Overall score: 0%

1 -

Question 30 of 191

□ □

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	Insulin misuse
	Alcohol misuse
	Retroperitoneal sarcoma
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Dashboard

Overall score: **0%**

1 -

□ Question 31 of 191



A 34-year-old woman is referred to endocrinology clinic for assessment after reporting symptoms of heat intolerance, tremors and diarrhoea to her General Practitioner. Blood tests in primary care showed evidence of thyrotoxicosis. Further assessment at clinic revealed the symptoms had been present for approximately 4 weeks. The patient had initially attributed the symptoms to the stress of caring for her new baby, who had been born 6 weeks previously. She denied any symptoms of pain on eye movements, diplopia or skin rashes.

Past medical history included only her recent pregnancy with delivery by vaginal delivery. The patient took no regular medications. There was no family history of thyroid disorders. Prior to taking maternity leave, the patient worked as a lawyer. She did not drink or smoke.

Examination revealed a small, diffuse and mildly tender goitre with no evidence of thyroid bruit. There was fine tremor of outstretched hands but no exophthalmos or proptosis. Investigations requested following clinic review are listed below.

Thyroid stimulating hormone	0.1 microU / L (reference 0.4-5.0)
T4 free serum	19.5 pmol / L (reference 8.5-15.2)
T3 free serum	8.1 pmol / L (reference 3.5-6.5)
Thyroid peroxidase antibodies	250 mU / L (reference < 150)
Erythrocyte sedimentation rate	21 ml / h

Thyroid scintiscanning (Technitium-99): no significant thyroid uptake

What is the most likely diagnosis?

	Graves' disease
	Toxic thyroid nodule
	Viral thyroiditis
	Toxic multinodular goitre

	Post-partum thyroiditis
--	-------------------------

Dashboard

Overall score: **0%**
1 -

□ Question 31 of 191



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Dashboard

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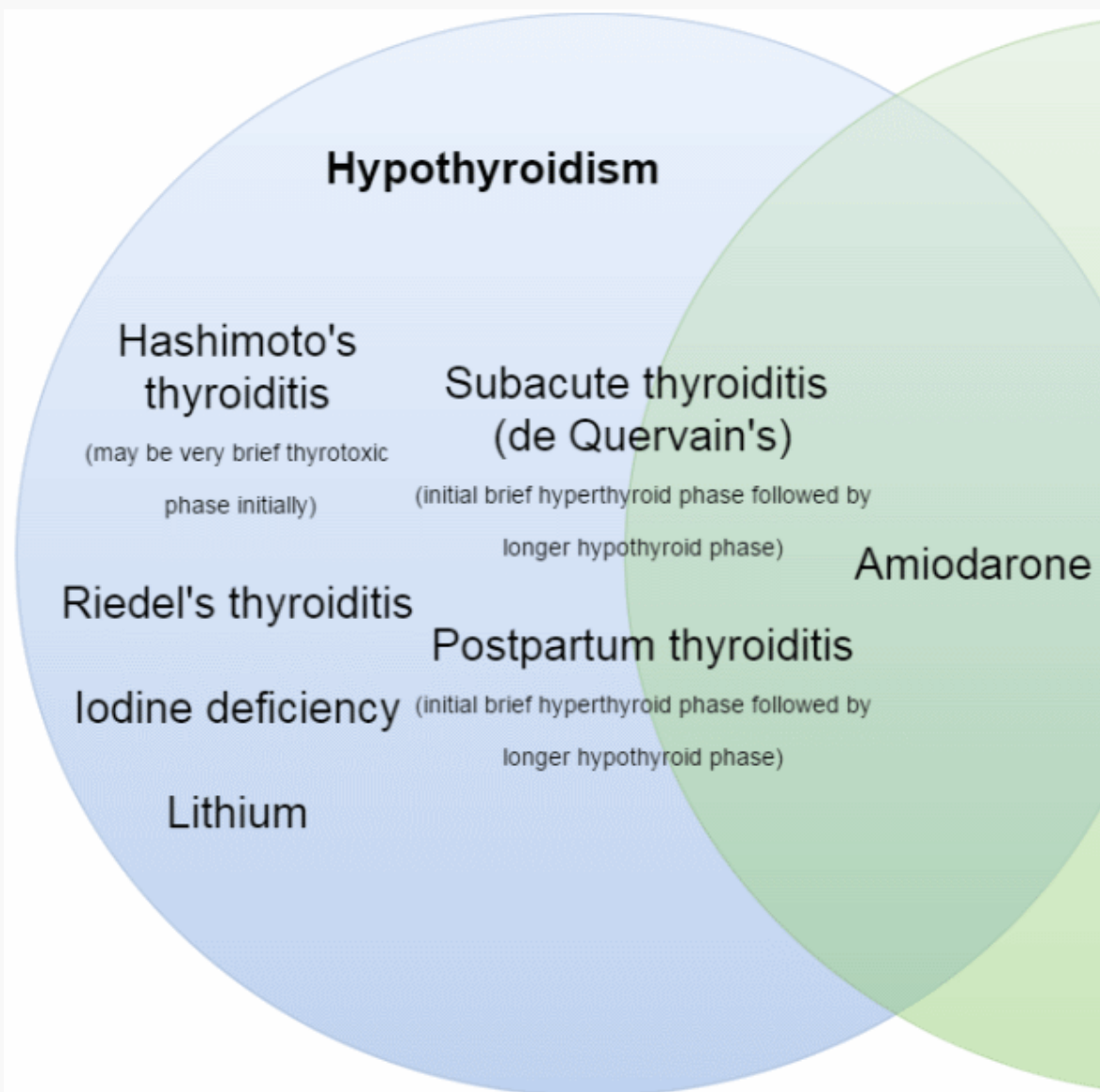
1 -

Question 31 of 191

A 34-year-old woman is referred with tremors and diarrhoea to her general practitioner. On assessment at clinic revealed a weight loss attributed the symptoms to thyroid disease. She has no symptoms of pain on eye movements.

Past medical history includes rheumatoid arthritis. She is on low-dose prednisolone. There was no family history of thyroid disease. She did not drink or smoke.

Examination revealed a small, firm, non-tender thyroid gland. She had outstretched hands but no eye signs.



Thyroid stimulating hormone	
T4 free serum	
T3 free serum	8.1 pmol / L (reference 3.5-6.5)
Thyroid peroxidase antibodies	250 mU / L (reference < 150)
Erythrocyte sedimentation rate	21 ml / h

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	Graves' disease
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Dashboard

Overall score: **0%**

1 -

□ Question 32 of 191



A middle age woman is being treated for symptomatic hypercalcaemia associated with a squamous cell lung cancer (serum calcium 3.60 mmol/L). She is slow to respond to initial measures of saline hydration and intravenous pamidronate. Whilst awaiting surgical resection for her underlying cancer what may be the next best step in her management?

Na ⁺	142 mmol/l
K ⁺	4.3 mmol/l
Urea	7.0 mmol/l
Creatinine	89 µmol/l
Glucose	4.8 mmol/l

What is the most appropriate management?

	High dose loop diuretics
	Calcitonin 4 units/kg
	Insulin actrapid 50 units in 50% dextrose
	IV colloid administration instead of crystalloid
	Plasma exchange

Dashboard

Overall score: 0%

1 -

Question 32 of 191



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Dashboard

Overall score: **0%**

1 -

□ Question 33 of 191



A 60-year-old man attends a medical health check-up at his GP surgery. He was fit and well with a past medical history of childhood asthma and osteoarthritis in his fingers. His observations were included a blood pressure of 129/80 mmHg, pulse of 82 bpm, and oxygen sats of 97%.

Blood tests were performed and revealed:

Hb	138 g/l	
Platelets	$190 \times 10^9/l$	
WBC	$7.6 \times 10^9/l$	
Na ⁺	139 mmol/l	
K ⁺	3.9 mmol/l	
Urea	4.1 mmol/l	
Creatinine	9.2 μ mol/l	
Bilirubin	15 μ mol/l	
ALP	52 u/l	
ALT	26 u/l	
γ GT	58 u/l	
Albumin	40 g/l	
Serum corrected calcium	2.77 mmol/L	
Serum phosphate	0.90 mmol/l	
Parathyroid hormone	5.9 pmol/L	normal range 1.2-5.8 pmol/L

A 24 hour urinary calcium test was performed based on the results above and revealed a result of 0.5 mmol/24 hours (normal range 2.4-7.4 mmol/24 hours)

What is the most likely diagnosis?

	Primary hyperparathyroidism
	Secondary hyperparathyroidism
	Vitamin D toxicity
	Multiple endocrine neoplasia type A
	Familial benign hypocalciuric hypercalcaemia

Dashboard

Overall score: 0%

1 -

□ Question 33 of 191



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Dashboard

Overall score: **0%**
1 -

Question 34 of 191



A 32 year-old man is referred by his GP after collapsing while at work. He does not remember the episode but witnesses say that there was no incontinence or fitting and the patient does not have a sore mouth or tongue. This is the first time this has happened and the patient does not have any other past medical history of note and takes no regular medication.

Examination reveals a blood pressure of 162/95 mmHg, a pulse of 74 beats per minute, a respiratory rate of 16 and a temperature of 37.4°C. Heart sounds 1 and 2 are present with no added sounds, the lung fields are clear and his abdomen is soft and non-tender.

Blood tests performed and reveal:

Na ⁺	143 mmol/l
K ⁺	3.0 mmol/l
Urea	5.6 mmol/l
Creatinine	76 µmol/l
Bicarbonate	31 mmol/l
Renin	low
Aldosterone	low

Which of the following is the best treatment?

	Amiloride
	Bumetanide
	Spironolactone
	ACE inhibitor

Dashboard

Overall score: **0%**

1 -

Question 34 of 191



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Which of the following is the best treatment?

	Amiloride
	Bumetanide
	Spironolactone
	ACE inhibitor

□ Question 35 of 191



A 52-year-old lorry driver was referred to the secondary care diabetes mellitus by his GP with poorly controlled diabetes. He was diagnosed with type 2 diabetes mellitus six years ago. Unfortunately, he has not engaged with lifestyle interventions and his diabetes has been poorly controlled since diagnosis. He has since developed diabetic nephropathy and proliferative retinopathy. Other than diabetes he has a past medical history comprising of ischaemic heart disease, hypertension, hypercholesterolaemia, osteoarthritis and gout. At the point of referral he was prescribed aspirin 75mg OD, ramipril 10mg OD, simvastatin 40mg ON, naproxen 250mg BD, co-codamol 8/500 2tabs QDS, lansoprazole 30mg OD, metformin 500mg TDS, gliclazide 80mg BD and pioglitazone 30mg OD. He smoked 20 cigarettes per day and consumed 15 units of alcohol per week.

Examination revealed an obese gentleman with a BMI of 38 kg/m. His blood pressure was 148/88 mmHg. Cardiovascular examination revealed the presence of normal heart sounds and a JVP of 3cm. Examination of the respiratory, abdominal and neurological systems was unremarkable. Investigations reveal the following results:

Na ⁺	136 mmol/l
K ⁺	5.1 mmol/l
Urea	14.1 mmol/l
Creatinine	148 µmol/l
Total cholesterol	5.1 mmol/l
HDL cholesterol	1.3 mmol/l
HbA1c	68 mmol/mol (8.4%)

What is the next best step management step?

	Commence exenatide
	Commence sitagliptin
	Commence insulin glargine

	Increase dose of pioglitazone
	Commence orlistat

Dashboard

Overall score: **0%**

1 -

Question 35 of 191



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□ Question 35 of 191



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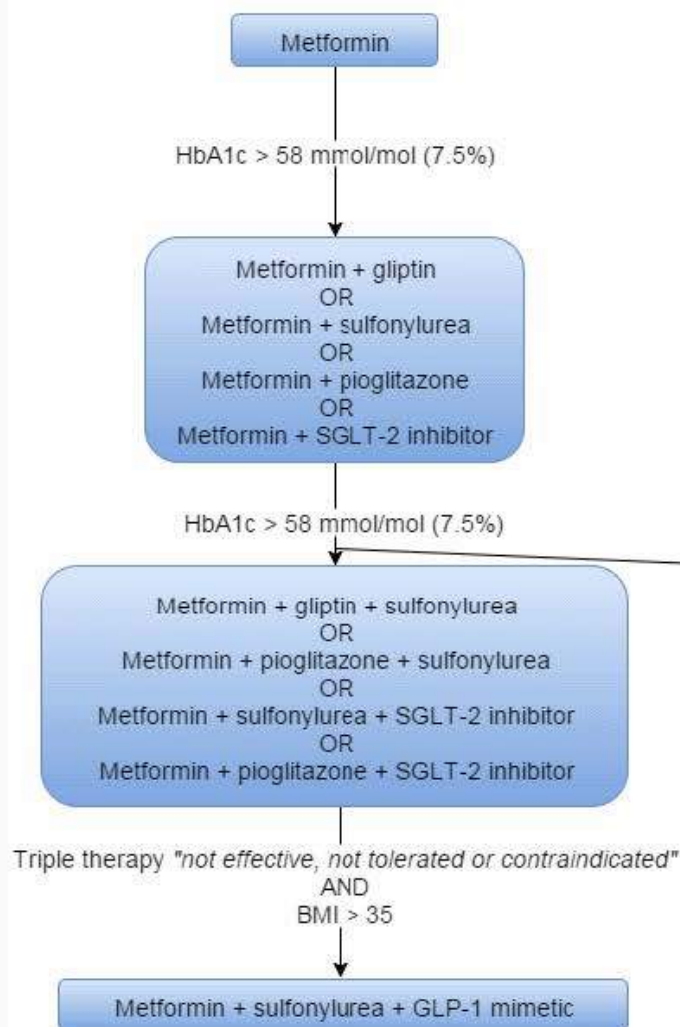
	Increase dose of pioglitazone
	Commence orlistat

Dashboard

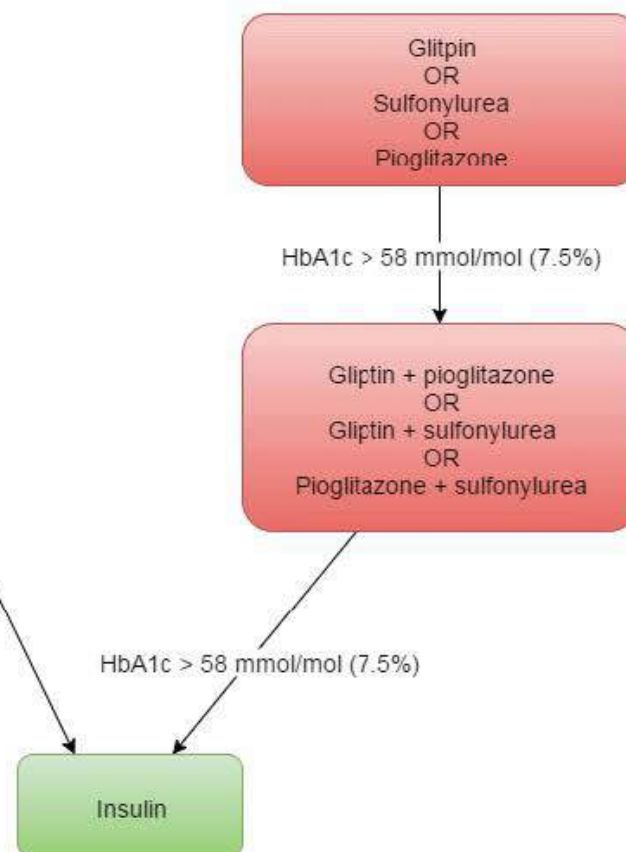
Overall score: **0%**

1 -

Metformin



Metformin not tolerated or CI



Question 35 of 191

A 52-year-old lorry driver was diagnosed with type 2 diabetes. He was diagnosed with type 2 diabetes, hypertension, hypercholesterolaemia, and proliferative retinopathy. He is currently on ramipril 10mg OD, simvastatin 40mg OD, metformin 500mg TDS, and glycerol phosphate 15 units of alcohol per week.

Examination revealed an obese man. Cardiovascular examination was normal. Respiratory, abdominal and neurological examination were normal.

Primary prevention

(10-year cardiovascular risk $\geq 10\%$ OR
most type 1 diabetics OR
CKD if eGFR $< 60\text{ml/min/m}^2$)

Atorvastatin 20mg od

(if non-HDL has not fallen by $\geq 40\%$ then
consider titrating up to 80mg)

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K ⁺	5.1 mmol/l
Urea	14.1 mmol/l
Creatinine	148 $\mu\text{mol/l}$
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What is the next best step management step?

	Commence exenatide
	Commence sitagliptin
	Commence insulin glargine

	Increase dose of pioglitazone
	Commence orlistat

Dashboard

Overall score: **0%**
1 -

□ Question 36 of 191

□ □

A 30-year-old male with background of type one diabetes mellitus presents with abdominal pain and shortness of breath. Investigations confirm he has diabetic ketoacidosis. Which one of the following investigations would suggest a discussion for possible intensive care admission?

	Lactate 3 mmol/L
	Bicarbonate level 19 mmol/L
	pH 7.27
	White cell count $30 \times 10^9/L$
	Potassium 3.4 mmol/L

Dashboard

Overall score: 0%

1 -

□ Question 36 of 191

□ □

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	White cell count $30 \times 10^9/L$
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Dashboard

Overall score: **0%**

1 -

Question 37 of 191

□ □

A 22-year-old Asian woman with a body mass index of 24 kg/m² presents with new onset acne, hirsutism, and weight gain. Upon further questioning, it is found that she has had irregular periods for the last two years. On examination, there is mild acne and thick hair growth on her chin and areola region. Abdominal exam is unremarkable.

What are the most likely biochemical results given the clinical findings?

	Raised testosterone, low LH/FSH ratio, insulin resistance
	Low testosterone, low LH/FSH ratio, insulin resistance
	Low testosterone, raised LH/FSH ratio, insulin resistance
	Raised testosterone, raised LH/FSH ratio, increased insulin sensitivity
	Raised testosterone, raised LH/FSH ratio, insulin resistance

Dashboard

Overall score: 0%

1 -

□ Question 37 of 191

□ □

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	Raised testosterone, raised LH/FSH ratio, insulin resistance

Dashboard

Overall score: **0%**

1 -

Question 38 of 191

A 55-year-old male presents to his general practitioner with a 2-month history of sweating, fatigue and daytime tiredness. He attributed his tight wedding ring to 'fluid retention' and in the last 2 weeks, he has been experiencing worsening headaches and deterioration in his vision. He has otherwise no past medical history and does not take any regular medications.

Which of the following findings would be in keeping with the above?

<input type="checkbox"/>	Homonymous hemianopia
<input type="checkbox"/>	Overbite
<input type="checkbox"/>	Positive Tinel's sign
<input type="checkbox"/>	Reduced FVC on spirometry
<input type="checkbox"/>	Dysdiadochokinesia

Dashboard

Overall score: **0%**

1 -

Question 38 of 191

□ □

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Which of the following findings would be in keeping with the above?

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	Overbite
	Positive Tinel's sign
	Reduced FVC on spirometry
	Dysdiadochokinesia

Dashboard

Overall score: **0%**

1 -

□ Question 39 of 191



You are asked to review a 43-year-old man in theatre recovery who has developed a fever and tachycardia post-operatively. He is previously fit and well, does not smoke and drinks alcohol only occasionally. He had fallen the previous night and suffered a distal radius fracture and has just undergone a open reduction and internal fixation under general anaesthetic. During anaesthesia he received 4mg ondansetron and 8mg dexamethasone for post-operative nausea and 10mg morphine for pain. He denies feeling unwell and has no symptoms suggestive of intercurrent infection.

On examination his heart rate is 130 beats/min and irregular, his blood pressure is 135/74 mmHg and his temperature is 39.4°C. His chest is clear to auscultation, his abdomen soft and non-tender and there is no rash or meningism. His right forearm is in plaster, but is not particularly painful and his fingers are warm and have normal sensation.

Hb	130 g/l
Platelets	460 * 10 ⁹ /l
WBC	10.5 * 10 ⁹ /l
Na ⁺	138 mmol/l
K ⁺	4.1 mmol/l
Urea	5.1 mmol/l
Creatinine	95 µmol/l
C-reactive protein	1 mg/L
Thyroid stimulating hormone	<0.02 mIU/L
Cortisol	45 µg/dL

What is the most appropriate initial treatment?

	Carbimazole
	Hydrocortisone

	Propranolol
	Broad spectrum antibiotics
	Crystalloid infusion

Dashboard

Overall score: 0%

1 -

Question 39 of 191



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	Propranolol
	Broad spectrum antibiotics
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Dashboard

Overall score: **0%**
1 -

Question 39 of 191

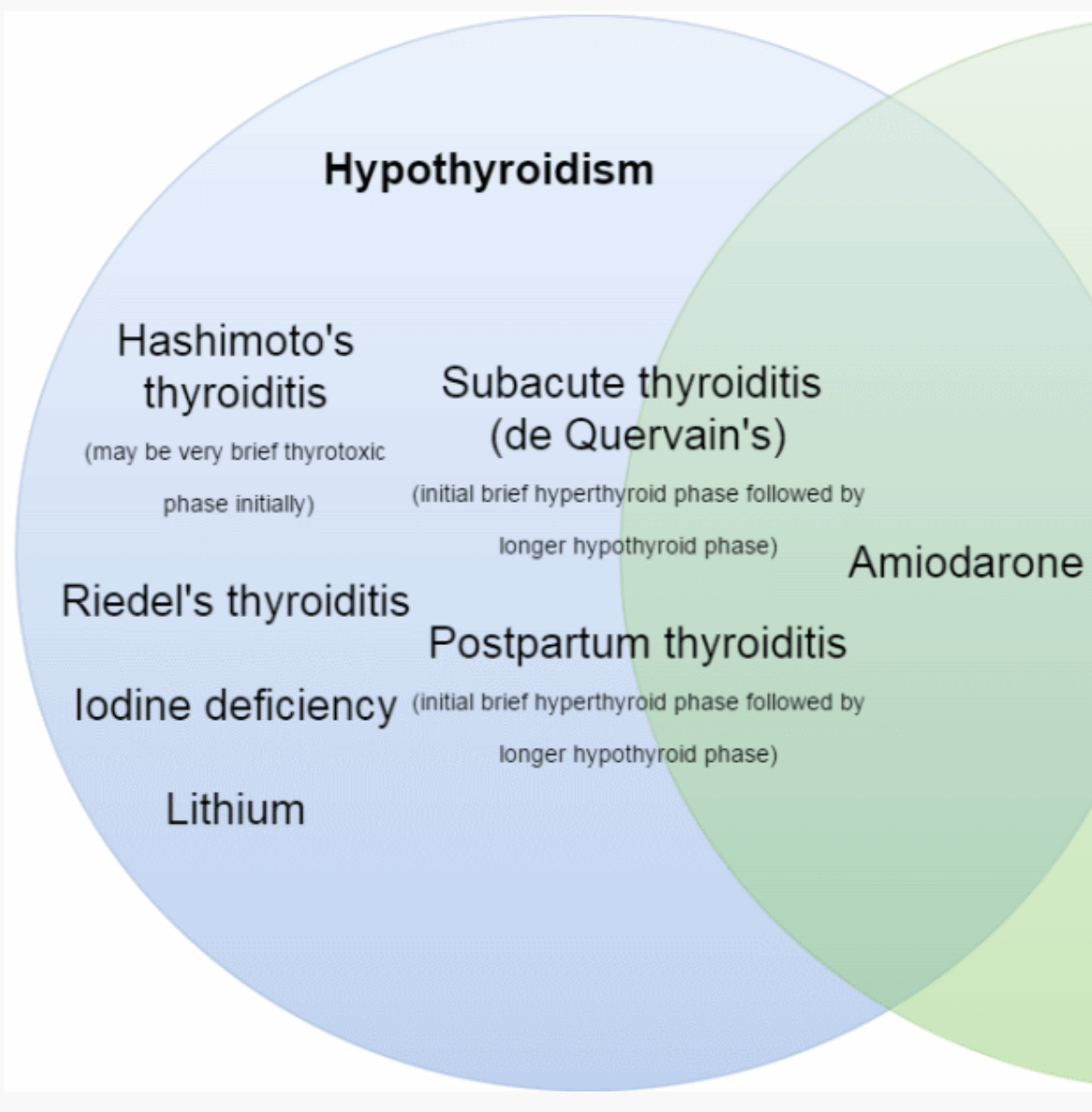
You are asked to review a 45-year-old man who is scheduled for a major abdominal operation. He is previously healthy. On the previous night he suffered from severe nausea and vomiting. During the operation he received 10mg morphine.

On examination his heart rate is 100/min, blood pressure is 100/60 mmHg, and his temperature is 39.4°C. His chest is clear to auscultation. His right forearm is in plaster, but is not painful.

Hb	
Platelets	
WBC	
Na ⁺	
K ⁺	4.1 mmol/L
Urea	5.1 mmol/L
Creatinine	95 µmol/L
C-reactive protein	1 mg/L
Thyroid stimulating hormone	<0.02 mIU/L
Cortisol	45 µg/dL

What is the most appropriate initial treatment?

Carbimazole
Hydrocortisone



	Propranolol
	Broad spectrum antibiotics
	Crystalloid infusion

Dashboard

Overall score: **0%**
1 -

□ Question 40 of 191



A 31-year-old female presents with a 2-day history of abdominal pain, a 5-day history of diarrhoea and vomiting and reduced appetite. She is a known type one diabetic with background diabetic retinopathy and stage 3 chronic kidney disease. She usually takes 32 units lantus at night and variable doses of Novomix with meals however due to her poor appetite she has not taken these for 2 days. On examination, she looks unwell. The airway is patent and chest is clear. Respiratory rate is 26/min with normal oxygen saturations on air. Pulse is 120/min and thready with a capillary refill of 3 seconds centrally. Blood pressure is 103/45 mmHg with a temperature of 36.7°C. Abdomen is generally tender without guarding. Capillary blood glucose is 26 and ketones are 4.9. Arterial blood gas is as follows:

pH	7.32
pO ₂	11.6 kPa
pCO ₂	3.32 kPa
Bicarbonate	14 mmol/l
Base Excess	-6.5 mmol/l
Lactate	2.1 mmol/l

The patient is currently being fluid resuscitated appropriately. What form of insulin therapy would you advise?

	Dose of novomix now and increase usual lantus by 8 units
	Variable rate i.v insulin, continue all s/c insulins
	Recommence normal s/c insulin regimen
	Fixed rate i.v insulin, continue lantus
	Fixed rate i.v insulin, stop all s/c insulin

□ Question 40 of 191



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	Variable rate i.v insulin, continue all s/c insulins
	Recommence normal s/c insulin regimen
	Fixed rate i.v insulin, continue lantus
	Fixed rate i.v insulin, stop all s/c insulin

Question 41 of 191

□ □

A 55 year-old male presents to endocrine outpatient clinic for investigation of gynaecomastia. On examination he has bilateral growth of breast tissue with palpable glandular tissue around the areolae. His past medical history includes hypertension, hypothyroidism, and congestive cardiac failure. He drinks 30 units of alcohol per week. His regular medications include: levothyroxine, amlodipine, bisoprolol, lisinopril and spironolactone.

On examination he is of normal stature, there are no peripheral stigmata of chronic liver disease or testicular masses.

What is the most likely explanation of his gynaecomastia?

	Cirrhosis
	Hypopituitarism
	Iatrogenic
	Klinefelter's syndrome
	Idiopathic

Dashboard

Overall score: 0%

1 -

Question 41 of 191

□ □

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On examination he is of normal stature, there are no peripheral stigmata of chronic liver disease or testicular masses.

What is the most likely explanation of his gynaecomastia?

	Cirrhosis
	Hypopituitarism
	Iatrogenic
	Klinefelter's syndrome
	Idiopathic

Dashboard

Overall score: **0%**

1 -

Question 42 of 191

□ □

A 39 year-old man presents to his GP for an annual review of his type 1 diabetes. His main complaints over the last year are having several episodes of vomiting after meals and chronic constipation, as well as having loss of sensation on both of his legs up to his knees and some sensory loss in his fingertips. On further questioning, you establish there has been no weight loss or haematemesis. On examination, his HbA1c is 72 mmol/mol, blood pressure is 138/88 mmHg and his pulse is regular and 84 beats per minute. Neurological examination demonstrates a lack of proprioception up to the ankle joint and loss of sensation as described above.

What is the most appropriate symptomatic treatment for the gastrointestinal symptoms described above?

	Lansoprazole
	Omeprazole
	Metoclopramide
	Mirtazapine
	Cyclizine

Dashboard

Overall score: 0%

1 -

Question 42 of 191

□ □

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Dashboard

Overall score: **0%**

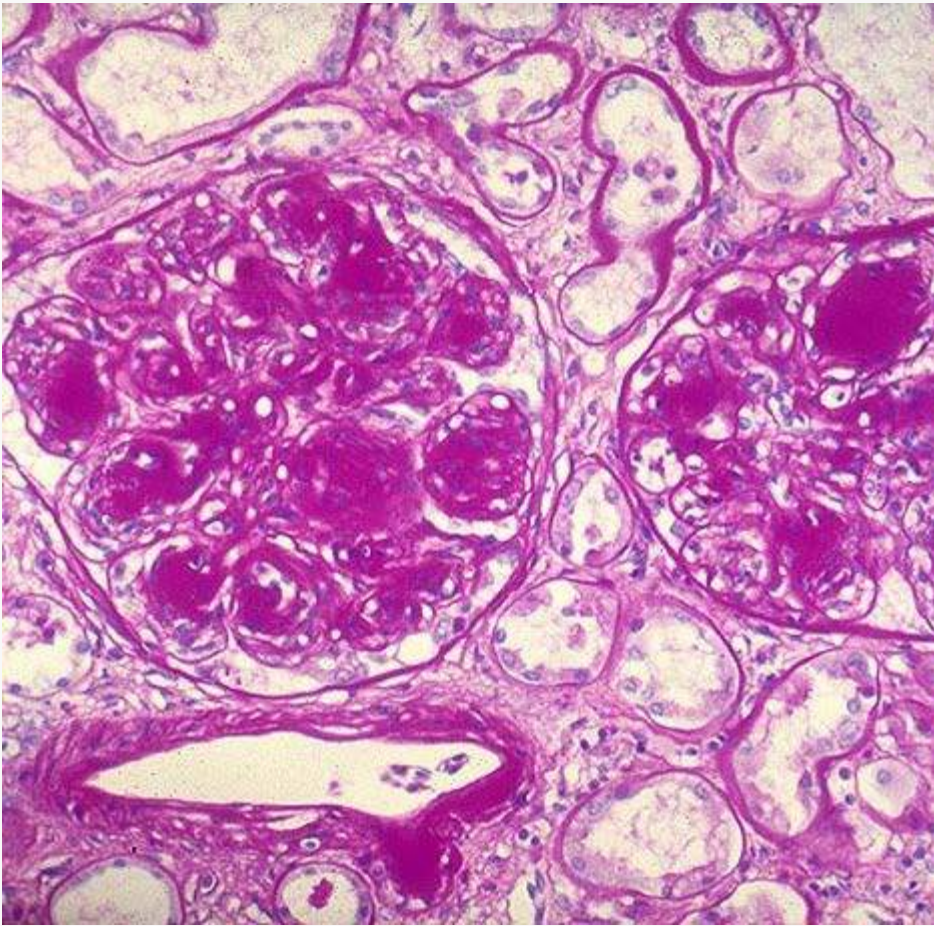
1 -

Question 42 of 191

A 39 year-old man presents to his GP for an anorexia. He is having several episodes of vomiting after meals. He has lost both of his legs up to his knees and some sensation in his legs. There has been no weight loss or haematemesis. On examination, his pulse is regular and 84 beats per minute. No tenderness at the ankle joint and loss of sensation as described above.

What is the most appropriate symptomatic treatment?

Lansoprazole
Omeprazole
Metoclopramide
Mirtazapine
Cyclizine



Dashboard

Overall score: 0%

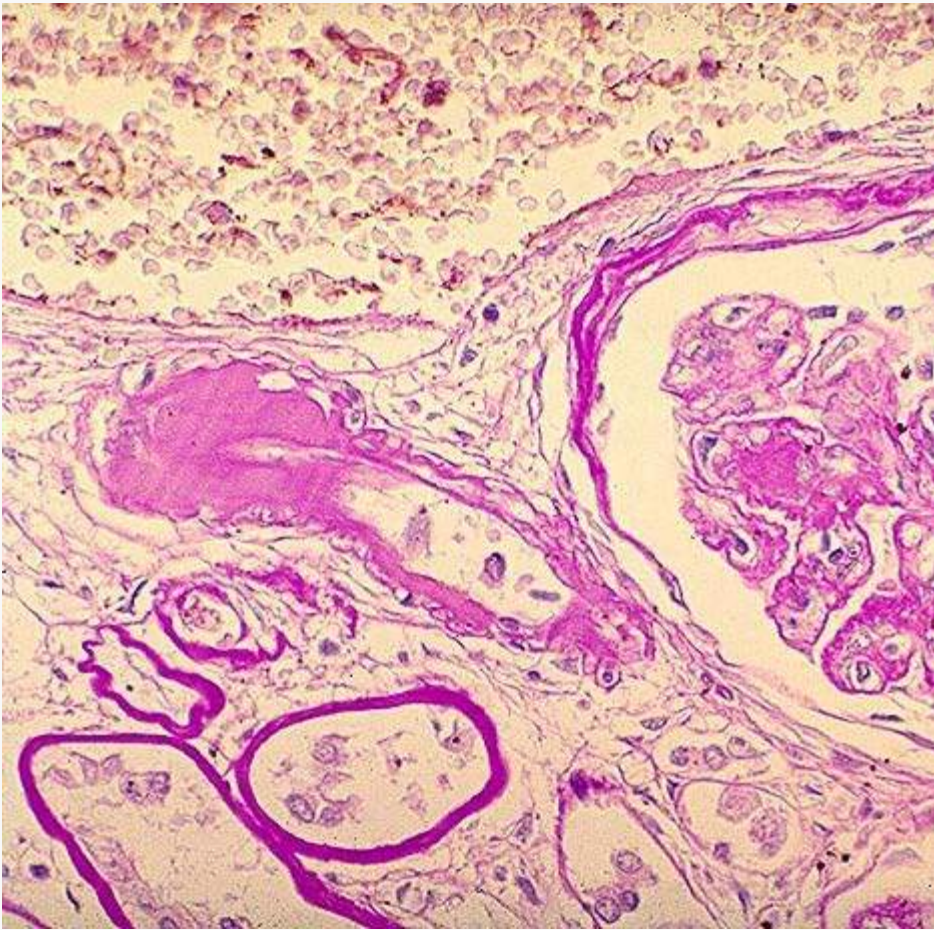
1 -

Question 42 of 191

A 39 year-old man presents to his GP for an abdominal pain. He is having several episodes of vomiting after meals. He has been unable to walk both of his legs up to his knees and some sensory deficit in both legs. There has been no weight loss or haematemesis. On examination, his pulse is regular and 84 beats per minute. No tenderness at the ankle joint and loss of sensation as described at the knees.

What is the most appropriate symptomatic treatment?


Lansoprazole
Omeprazole
Metoclopramide
Mirtazapine
Cyclizine



Dashboard

Overall score: 0%

1 -

 Question 43 of 191



A 23-year-old female presented with acne and hirsutism worsening over the last 3 years. She attained menarche aged 10 and has irregular periods.

On examination, body mass index 29kg/m², heart rate 80/min, blood pressure 135/85 mmHg. Hirsutism and acanthosis nigricans are noticed along with mild clitoromegaly.

Bloods on 6th day after menstruation:

Estradiol	300 pmol/L (early follicular NR<300 pmol/L)
17OH-progesterone	20 nmol/L (NR<10 nmol/L)
Free Testosterone	3 nmol/L (NR<3 nmol/L)
LH	4 IU/L (NR 1-9 IU/L)
FSH	3 IU/L (NR 1-13 IU/L)
9am cortisol	150 nmol/L (NR 200-700 nmol/L)

What is the single most useful test?

<input type="checkbox"/>	CT adrenals
<input type="checkbox"/>	Karyotype
<input type="checkbox"/>	Pelvic USS
<input type="checkbox"/>	Short synacthen test
<input type="checkbox"/>	MRI pituitary

□ Question 43 of 191



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□ Question 43 of 191

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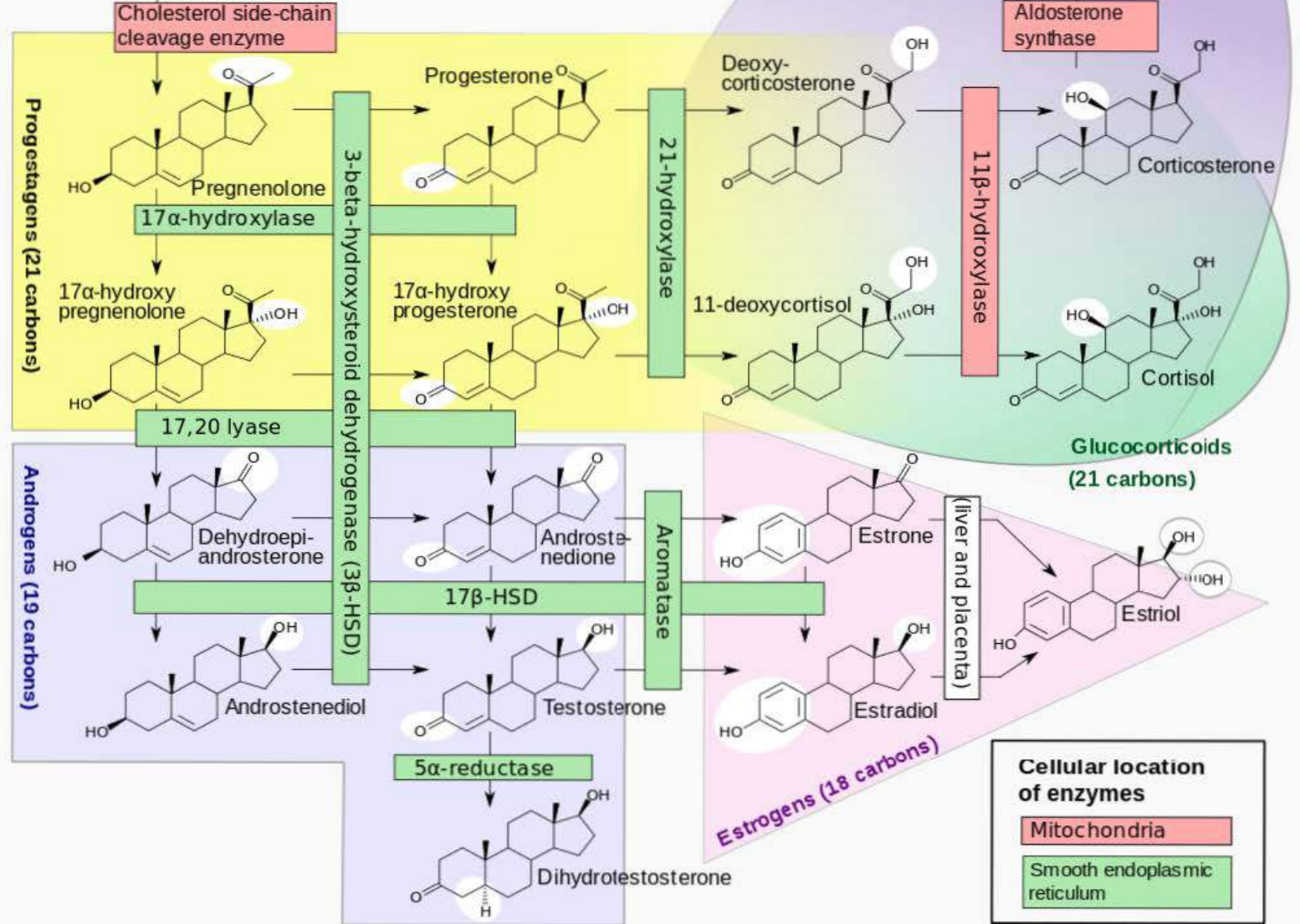
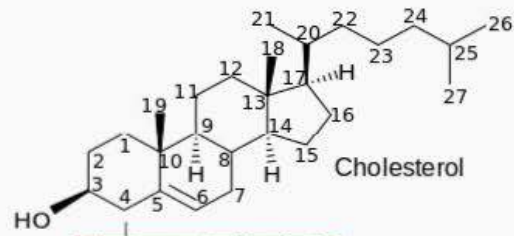
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What is the single most useful test?

	CT adrenals
	Karyotype
	Pelvic USS
	Short synacthen test
	MRI pituitary



Question 44 of 191

□ □

A 54-year-old gentleman is reviewed prior to discharge. He was admitted three days ago with an infective exacerbation of COPD requiring nebulisers and IV antibiotics but he did not need non-invasive ventilation or ITU admission. He has responded well to treatment and his wheeze is completely gone. His cough is also much improved. He has a background of type 2 diabetes mellitus, gout, diabetic retinopathy and hypertension. He raises concerns about his blood pressure as the nurses have told him it is persistently around 150mmHg systolic. He monitors blood pressure at home and normally his readings are much better. You reassure him that it is likely because his ramipril was held on admission. What should his blood pressure be less than during his next GP review?

	130/80mmHg
	135/85mmHg
	140/80mmHg
	140/90mmHg
	130/90mmHg

Dashboard

Overall score: 0%

1 -

Question 44 of 191

□ □

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	130/80mmHg
	135/85mmHg
	140/80mmHg
	140/90mmHg
	130/90mmHg

Dashboard

Overall score: **0%**

1 -

Question 44 of 191

□ □

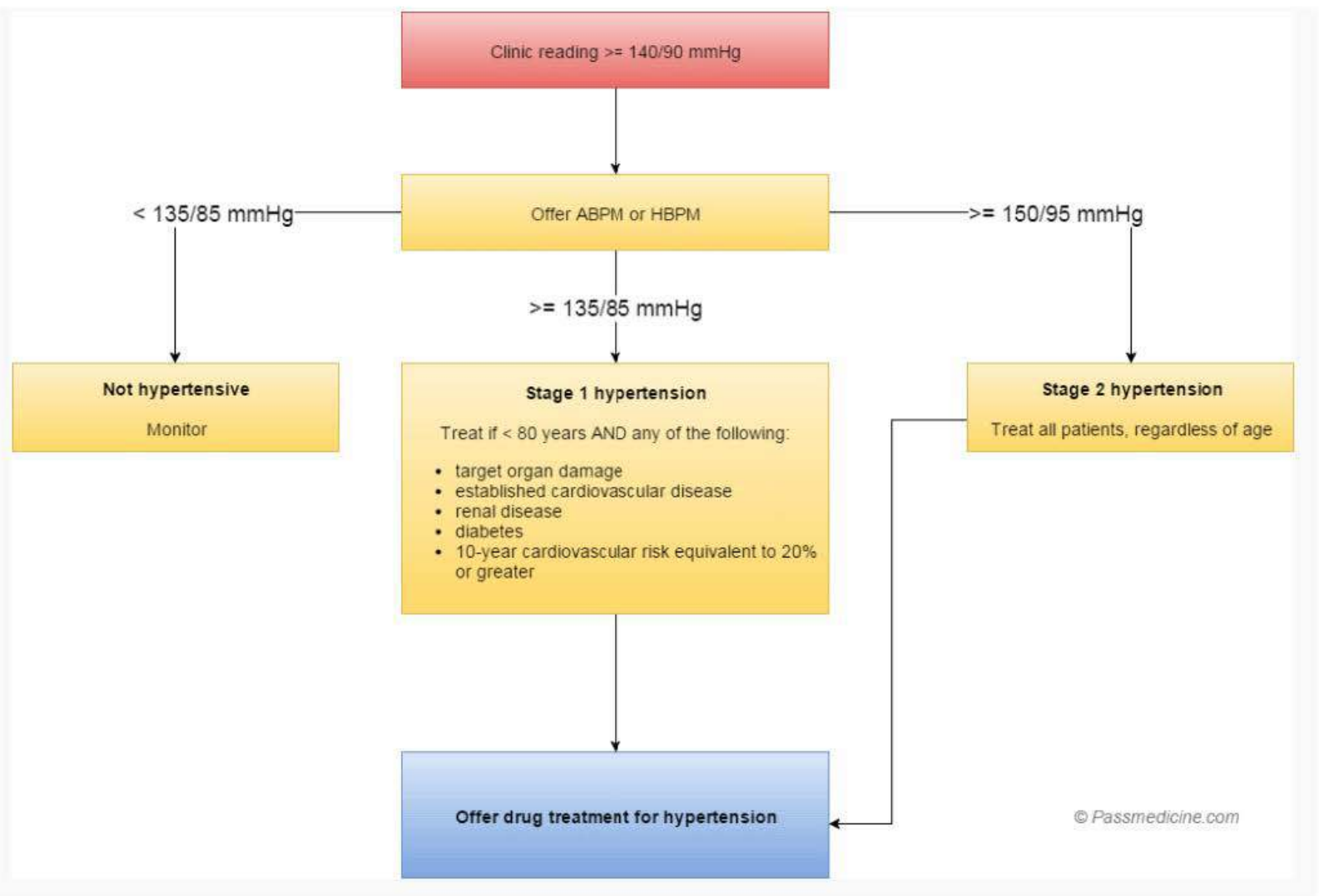
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	130/90mmHg

Dashboard

Overall score: 0%

1 -



Question 44 of 191

□ □

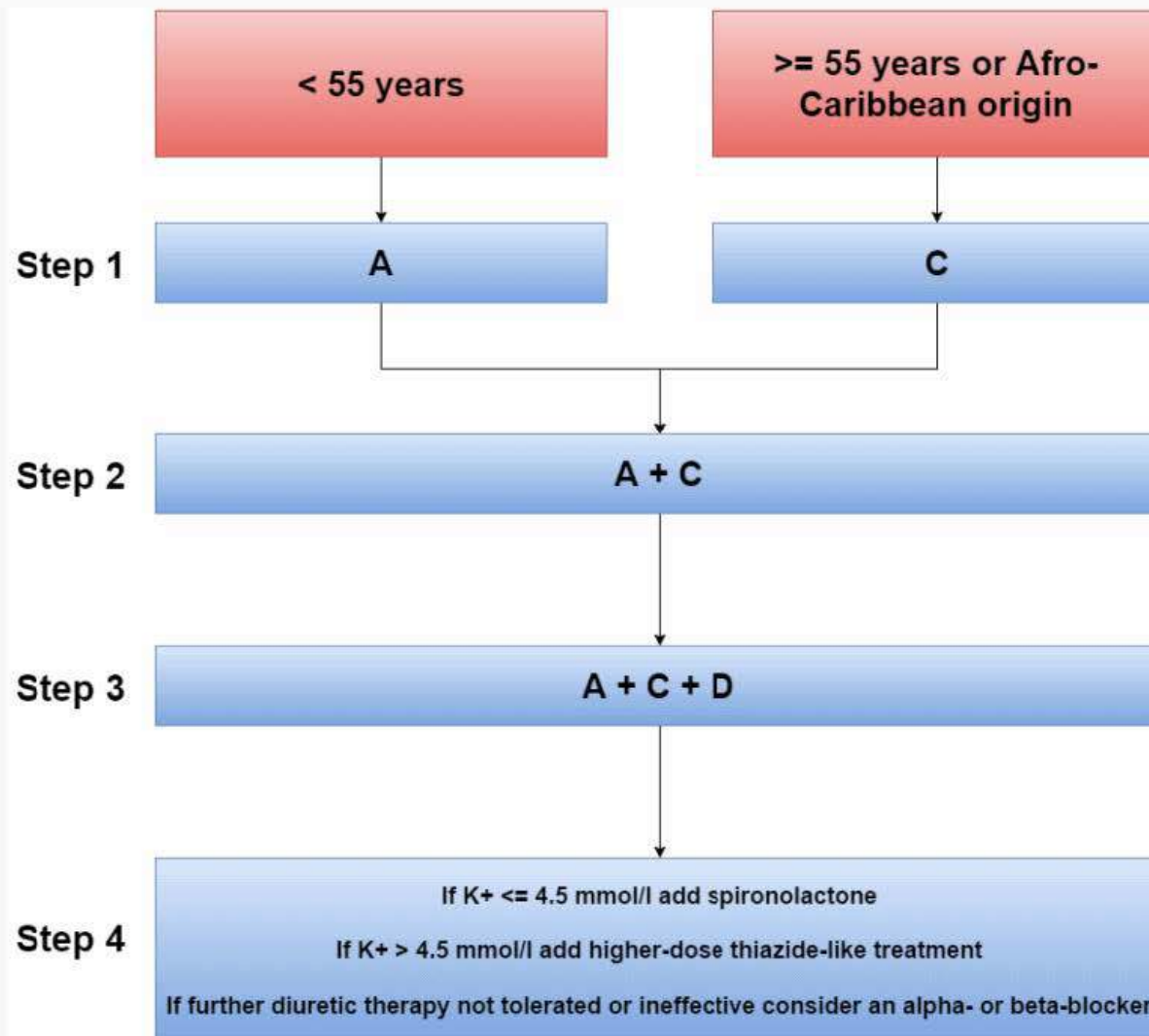
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	135/85mmHg
	140/80mmHg
	140/90mmHg
	130/90mmHg

Dashboard

Overall score: 0%

1 -



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Key

A = ACE inhibitor

C = Calcium channel blocker

D = Thiazide Diuretic

□ Question 45 of 191



A 60 year old woman had a thyroid function test requested by her General Practitioner after reporting some symptoms of mild lethargy. This had unexpectedly demonstrated a suppressed Thyroid Stimulating Hormone level (0.25 microU / L) but normal free T4 level (14.1 pmol / L). During further consultation, the patient denied any heat intolerance, weight loss, diarrhoea, hair or skin changes, palpitations or eye symptoms.

The patient had had a hysterectomy without oophorectomy at age 45 as treatment for menorrhagia secondary to fibroids. She remember reaching menarche at around the age of 13 or 14 years. There was no significant family history of coronary artery disease. The patient reported her mother had suffered a fractured neck of femur at the age of 75 years following a fall. The patient was a retired school teacher with an active lifestyle. She had never smoked and drank very little alcohol.

Examination showed no evidence of a goitre, no fine tremor and no lid lag. External examination of the eyes was unremarkable. Cardiovascular and respiratory examination was unremarkable.

The GP requested some further basic investigations and then repeated blood tests 2 months after the original test. At this time, the patient reported her previous symptoms of lethargy had improved; with hindsight she attributed this to grief due to the recent death of a close friend.

Ambulatory blood pressure monitoring: average blood pressure 125 / 75 mmHg

ECG: sinus rhythm at 75 bpm; normal axis; no abnormality of QRS, ST interval or T waves.

Haemoglobin	12.8 g / dL
White cell count	6.5 x 10 ⁹ /l
Platelets	206 x 10 ⁹ /l
Urea	6.2 mmol / L
Creatinine	95 micromol / L
Sodium	137 mmol / L
Potassium	4.0 mmol / L

C-reactive protein	< 1
Parathyroid hormone	3.7 pmol / L (reference 1.2-5.8)
Thyroid-stimulating hormone	0.21 microU / L (reference 0.4-5.0)
T4 free serum	13.8 pmol / L (reference 8.5-15.2)
T3 free serum	5.6 pmol / L (reference 3.5-6.5)
HbA1C	5.6 % (reference 4-6)
Total cholesterol	4.0 mmol / L
LDL cholesterol	1.8 mmol / L
HDL cholesterol	1.9 mmol / L

What is the most appropriate management of the deranged thyroid function tests?

<input type="checkbox"/>	DEXA scan
<input type="checkbox"/>	Thyroid ultrasound
<input type="checkbox"/>	Start treatment with simvastatin
<input type="checkbox"/>	Radioiodine therapy
<input type="checkbox"/>	Treat with propylthiouracil

Dashboard

Overall score: **0%**

1 -

□ Question 45 of 191



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The GP requested some further basic investigations and then repeated blood tests 2 months after the original test. At this time, the patient reported her previous symptoms of lethargy had improved; with hindsight she attributed this to grief due to the recent death of a close friend.

Ambulatory blood pressure monitoring: average blood pressure 125 / 75 mmHg

ECG: sinus rhythm at 75 bpm; normal axis; no abnormality of QRS, ST interval or T waves.

Haemoglobin	12.8 g / dL
White cell count	6.5 x 10 ⁹ /l
Platelets	206 x 10 ⁹ /l
Urea	6.2 mmol / L
Creatinine	95 micromol / L
Sodium	137 mmol / L
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C-reactive protein	< 1
Parathyroid hormone	3.7 pmol / L (reference 1.2-5.8)
Thyroid-stimulating hormone	0.21 microU / L (reference 0.4-5.0)
T4 free serum	13.8 pmol / L (reference 8.5-15.2)
T3 free serum	5.6 pmol / L (reference 3.5-6.5)
HbA1C	5.6 % (reference 4-6)
Total cholesterol	4.0 mmol / L
LDL cholesterol	1.8 mmol / L
HDL cholesterol	1.9 mmol / L

What is the most appropriate management of the deranged thyroid function tests?

	DEXA scan
	Thyroid ultrasound
	Start treatment with simvastatin
	Radioiodine therapy
	Treat with propylthiouracil

Dashboard
Overall score: 0% 1 -

Question 46 of 191

□ □

A 67 year old woman with a known history of breast cancer with bony metastases is admitted to hospital unwell. She has confusion, headache, abdominal pain, generalised bony pain and significant nausea with vomiting.

Blood tests reveal:

Sodium	132mmol/L	Albumin	22mmol/L
Potassium	4.1mmol/L	Calcium (adj)	3.89mmol/L
Urea	19.2mmol/L	Phosphate	1.01mmol/L
Creatinine	191µmol/L	Magnesium	0.86mmol/L
ALP	212U/L		

She is aggressively fluid resuscitated with 0.9% sodium chloride 125ml/hour for 48 hours and given 90mg intravenous pamidronate.

Repeat blood tests demonstrate an improvement in the renal function but the adjusted calcium is still greater than 3.0mmol/L.

What is the next most suitable step in this patients management?

	Repeat infusion 90mg pamidronate
	200mg intravenous hydrocortisone four times daily
	100 units subcutaneous calcitonin three times daily
	250ng oral calcitriol single dose
	Refer to ITU to commence haemofiltration

□ Question 46 of 191



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	Refer to ITU to commence haemofiltration

Question 47 of 191

□ □

A 55-year-old man presents to the endocrine clinic. He was diagnosed five years ago with type 2 diabetes and is struggling to control his sugars. He is currently taking:

Metformin 1g BD

Glicazide 160mg BD

Sitagliptin 100mg OD

He is a bus driver and struggles to control his weight with his hectic shifts. Current BMI is 34 kg/m².

Investigations:

Serum creatinine	120 µmol/L (60-110)
Haemoglobin A1c	66 mmol/mol (8.2%)

What would be the most appropriate next step?

	Canagliflozin
	Glibenclamide
	Increase metformin
	Stop sitagliptin and add insulin
	Stop sitagliptin and add exenatide

Dashboard

Overall score: 0%

Question 47 of 191

□ □

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Dashboard

Overall score: **0%**

Question 47 of 191

□ □

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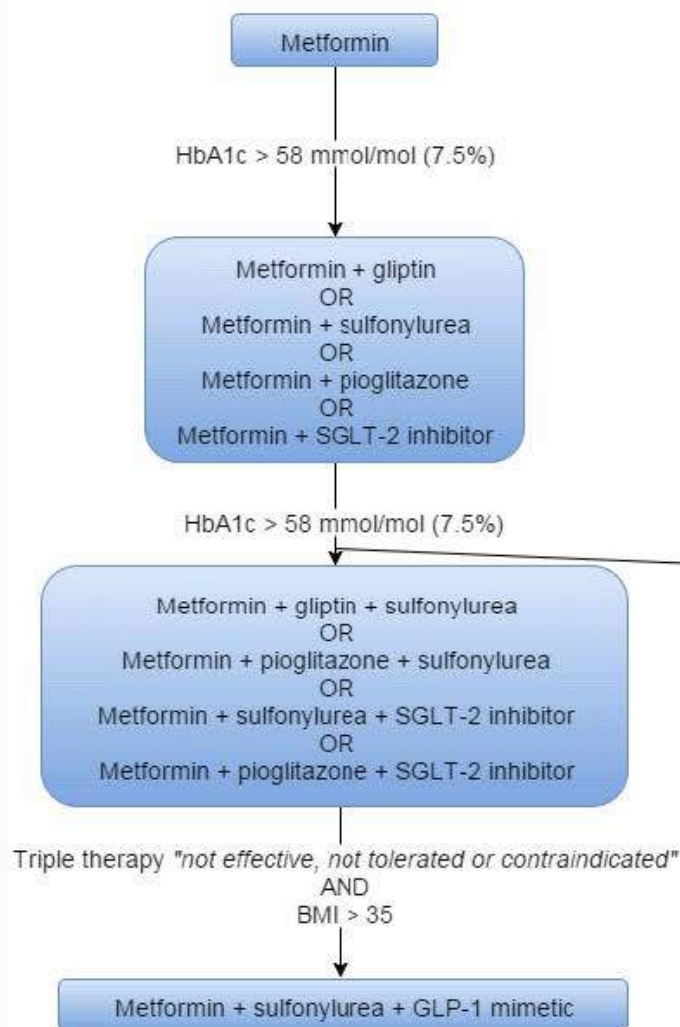
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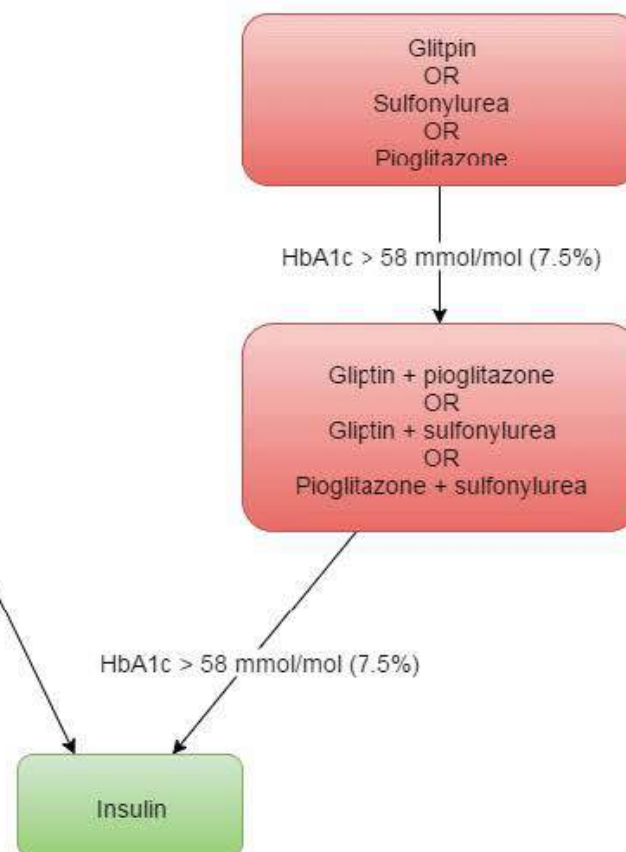
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Metformin



Metformin not tolerated or CI



Question 47 of 191

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Metformin 1g BD
Glicazide 160mg BD
Sitagliptin 100mg OD

He is a bus driver and struggles

Investigations:

Serum creatinine	120 $\mu\text{mol/L}$
Haemoglobin A1c	66 mmol/mol

Primary prevention

(10-year cardiovascular risk $\geq 10\%$ OR
most type 1 diabetics OR
CKD if eGFR $< 60\text{ml/min/m}^2$)

Atorvastatin **20mg od**

(if non-HDL has not fallen by $\geq 40\%$ then
consider titrating up to 80mg)

What would be the most appropriate next step?

	Canagliflozin
	Glibenclamide
	Increase metformin
	Stop sitagliptin and add insulin
	Stop sitagliptin and add exenatide

Dashboard

Overall score: **0%**

Question 48 of 191

□ □

A 23-year-old woman attends a fertility clinic with her partner. She complains of oligomenorrhoea and galactorrhoea and has failed to get pregnant after 18 months of regular unprotected intercourse. Blood tests reveal a serum prolactin level of 6000 mIU/l (normal <500 mIU/l). A pituitary MRI is arranged which shows a microprolactinoma.

Which of the following is the best initial treatment?

	Octreotide
	Bromocriptine
	Trans-sphenoidal hypophysectomy
	Pituitary radiotherapy
	Transfrontal hypophysectomy

Dashboard

Overall score: 0%

1 -

Question 48 of 191

□ □

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Which of the following is the best initial treatment?

	Octreotide
	Bromocriptine
	Trans-sphenoidal hypophysectomy
	Pituitary radiotherapy
	Transfrontal hypophysectomy

Dashboard

Overall score: **0%**

1 -

Question 49 of 191

□ □

A 29-year-old woman is referred by her GP to the outpatient department with increasing symptoms of heat intolerance, diarrhoea and anxiety over the past couple of weeks. The patient is 34 weeks pregnant with her first baby and has a past medical history of hyperthyroidism, currently being treated with 10mg carbimazole. She has no other past medical history of note and her mother also had hyperthyroidism. She does not smoke or drink alcohol and does not take any recreational drugs.

On examination, her pulse is 98 beats per minute, blood pressure is 124/82 mmHg and her respiratory rate is 14/min. Her oxygen saturation is 98% and temperature is 37.5°C.

Blood tests are performed and reveal:

Thyroid stimulating hormone (TSH)	0.04 mu/l
Free thyroxine (T4)	21 pmol/l
Total thyroxine (T4)	152 nmol/l

What is the most appropriate management?

	Refer patient for immediate caesarean section
	Increase carbimazole dose to 20mg once daily
	Commence radioiodine treatment
	Switch carbimazole to propylthiouracil
	Refer for a thyroidectomy

□ Question 49 of 191

□ □

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What is the most appropriate management?

	Refer patient for immediate caesarean section
	Increase carbimazole dose to 20mg once daily
	Commence radioiodine treatment
	Switch carbimazole to propylthiouracil
	Refer for a thyroidectomy

Question 50 of 191

□ □

A 58-year-old patient who has a history of hypertension is operated on by the neurosurgeons for an intracranial haemorrhage.

Over the next few days his serum sodium level progressively declines and by the third day has fallen to 118 mmol/l despite fluid restriction to 1L per day. Urine osmolarity is 700 mOsmol/l and urinary sodium is raised at 80 mmol/l.

What is the most likely diagnosis?

	Addisonian crisis
	Secretion of inappropriate antidiuretic hormone
	Cranial diabetes insipidus
	Hypovolaemia
	Fluid overload

Dashboard

Overall score: 0%

1 -

Question 50 of 191

□ □

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Over the next few days his serum sodium level progressively declines and by the third day has fallen to 118 mmol/l despite fluid restriction to 1L per day. Urine osmolarity is 700 mOsmol/l and urinary sodium is raised at 80 mmol/l.

What is the most likely diagnosis?

	Addisonian crisis
	Secretion of inappropriate antidiuretic hormone
	Cranial diabetes insipidus
	Hypovolaemia
	Fluid overload

Dashboard

Overall score: **0%**

1 -

□ Question 51 of 191

□ □

A 28-year-old lady is diagnosed with gestational diabetes in her first pregnancy. Her fasting blood glucose is 5.9mmol/l and blood glucose after oral glucose tolerance test (OGTT) is 8.2mmol/l. Blood glucose control during pregnancy is achieved with diet, exercise and metformin. She gives birth to a healthy child at 39 weeks. A fasting blood glucose at day 1 post-partum is 5.2mmol/l.

Which of the following statements is correct with respect to follow-up monitoring for diabetes?

	OGTT 6-13 weeks postpartum
	Fasting blood glucose test 6-13 weeks postpartum
	No routine follow up unless further pregnancy
	HbA1c 6-13 weeks postpartum
	Annual fasting blood glucose checks only

Dashboard

Overall score: 0%

1 -

□ Question 51 of 191

□ □

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	OGTT 6-13 weeks postpartum
	Fasting blood glucose test 6-13 weeks postpartum
	No routine follow up unless further pregnancy
	HbA1c 6-13 weeks postpartum
	Annual fasting blood glucose checks only

Dashboard

Overall score: **0%****1** -

□ Question 52 of 191

□ □

A 62-year-old man comes to the Emergency department with nausea and vomiting which has steadily worsened over the past 2-3 weeks. He had Type 2 diabetes for the past 7 years and is currently treated with metformin, sitagliptin and empagliflozin. He tells you he has lost some 5kg in weight over the past month. On examination his blood pressure is 110/65 mmHg, his pulse is 85 beats per minute and regular. Emergency blood testing reveal elevated ketones and a glucose of 12.2 mmol/l.

Which of the following is the most appropriate way to manage his glucose control?

	Add liraglutide
	Add long-acting insulin
	Change the empagliflozin for liraglutide
	Change the empagliflozin for long-acting insulin
	Stop the metformin

Dashboard

Overall score: 0%

1 -

□ Question 52 of 191



A 62-year-old man comes to the Emergency department with nausea and vomiting which has steadily worsened over the past 2-3 weeks. He had Type 2 diabetes for the past 7 years and is currently treated with metformin, sitagliptin and empagliflozin. He tells you he has lost some 5kg in weight over the past month. On examination his blood pressure is 110/65 mmHg, his pulse is 85 beats per minute and regular. Emergency blood testing reveal elevated ketones and a glucose of 12.2 mmol/l.

Which of the following is the most appropriate way to manage his glucose control?

	Add liraglutide
	Add long-acting insulin
	Change the empagliflozin for liraglutide
	Change the empagliflozin for long-acting insulin
	Stop the metformin

Dashboard

Overall score: **0%**

1 -

□ Question 52 of 191

□ □

A 62-year-old man comes to the Emergency department with nausea and vomiting which has steadily worsened over the past 2-3 weeks. He had Type 2 diabetes for the past 7 years and is currently treated with metformin, sitagliptin and empagliflozin. He tells you he has lost some 5kg in weight over the past month. On examination his blood pressure is 110/65 mmHg, his pulse is 85 beats per minute and regular. Emergency blood testing reveal elevated ketones and a glucose of 12.2 mmol/l.

Which of the following is the most appropriate way to manage his glucose control?

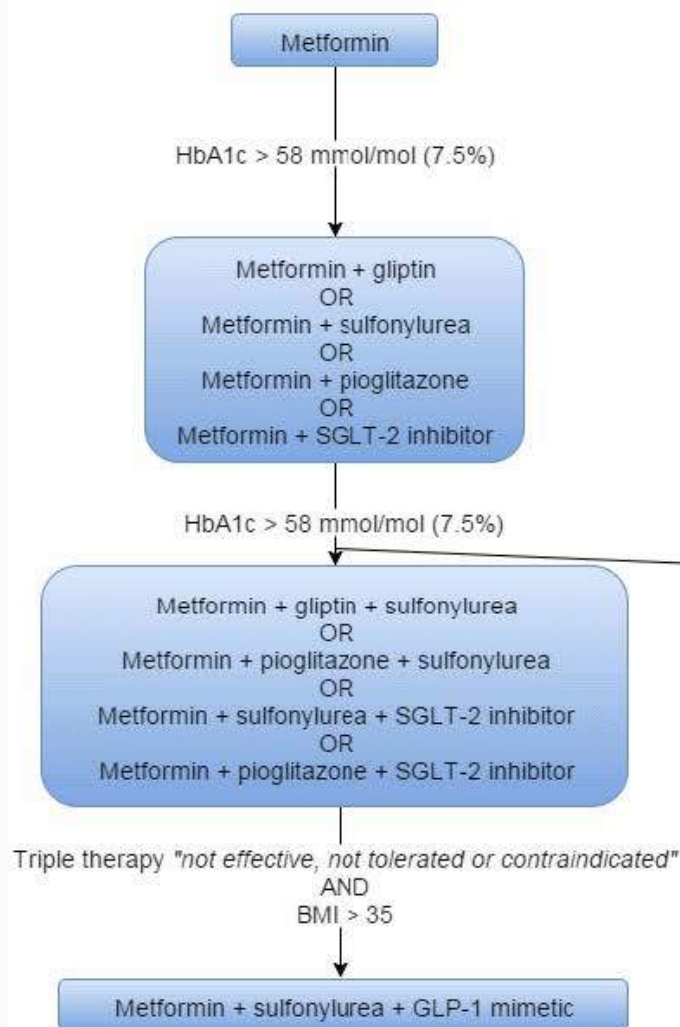
	Add liraglutide
	Add long-acting insulin
	Change the empagliflozin for liraglutide
	Change the empagliflozin for long-acting insulin
	Stop the metformin

Dashboard

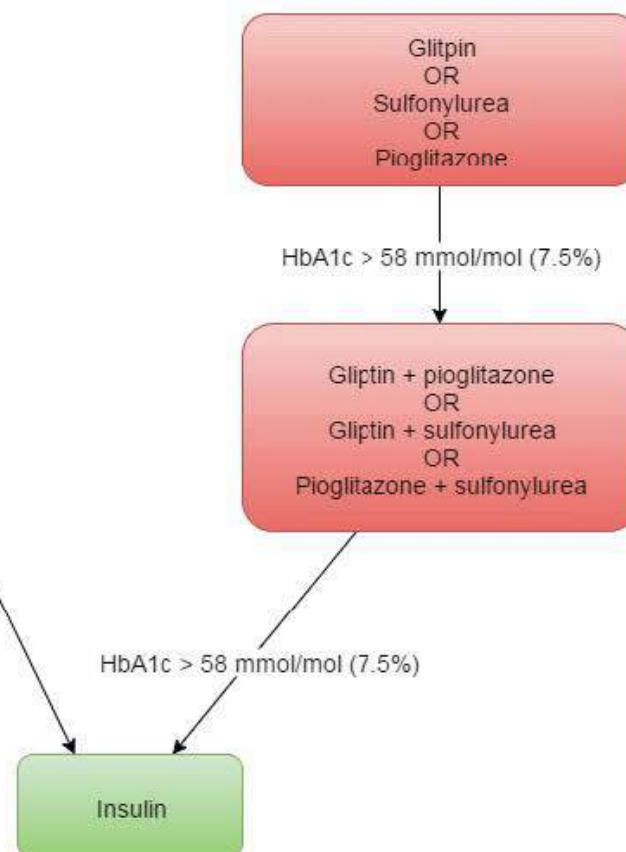
Overall score: 0%

1 -

Metformin



Metformin not tolerated or CI



Question 52 of 191

A 62-year-old man comes to you with a weight loss of 10 kg over the past 2-3 weeks. He had Type 2 diabetes and is on metformin 1700 mg od and empagliflozin 10 mg od. His blood pressure is 110/65 mmHg, his pulse is 68 bpm and his fasting glucose of 12.2 mmol/l.

Which of the following is the most appropriate management?

<input type="radio"/>	Add liraglutide
<input type="radio"/>	Add long-acting insulin
<input type="radio"/>	Change the empagliflozin to 25 mg od
<input checked="" type="radio"/>	Change the empagliflozin for long-acting insulin
<input type="radio"/>	Stop the metformin

Primary prevention

(10-year cardiovascular risk $\geq 10\%$ OR
most type 1 diabetics OR
CKD if eGFR $< 60\text{ml/min/m}^2$)



Atorvastatin 20mg od

(if non-HDL has not fallen by $\geq 40\%$ then
consider titrating up to 80mg)

Dashboard

Overall score: 0%

1 -

Question 53 of 191



A 30-year-old woman with a history of type 1 diabetes presents to the Emergency department with nausea and vomiting coupled with increased urinary frequency over the past 3 days. She has been progressively losing weight and reducing her insulin dose after starting empagliflozin prescribed to help her lose weight and reduce glucose fluctuations. She also admits to taking a Chinese herbal remedy for weight control. Blood pressure is 100/70 mmHg, pulse is 88 beats per minute. pH is 7.25, glucose is 8.1 mmol/l, urine testing reveals ketones +++

Which of the following is the most likely diagnosis?

	Empagliflozin related nephrotoxicity
	Hyperosmolar non-ketotic state
	Normoglycaemic ketoacidosis
	Starvation ketoacidosis
	Urinary sepsis

Dashboard

Overall score: 0%

1 -

Question 53 of 191



A 30-year-old woman with a history of type 1 diabetes presents to the Emergency department with nausea and vomiting coupled with increased urinary frequency over the past 3 days. She has been progressively losing weight and reducing her insulin dose after starting empagliflozin prescribed to help her lose weight and reduce glucose fluctuations. She also admits to taking a Chinese herbal remedy for weight control. Blood pressure is 100/70 mmHg, pulse is 88 beats per minute. pH is 7.25, glucose is 8.1 mmol/l, urine testing reveals ketones +++

Which of the following is the most likely diagnosis?

	Empagliflozin related nephrotoxicity
	Hyperosmolar non-ketotic state
	Normoglycaemic ketoacidosis
	Starvation ketoacidosis
	Urinary sepsis

Dashboard

Overall score: 0%

1 -

□ Question 54 of 191



A 30-year-old man was referred to endocrinology clinic for the assessment of the adverse consequences of anabolic steroid use. The patient reported that he had recently decided to stop using anabolic steroids, having been a regular user for the previous 5 years to support his body-building training. The patient cited the potential health risks of long-term anabolic steroid use as the reason behind his decision to cease his use.

The patient had followed a regime of an intramuscular injection of long-acting synthetic testosterone derivative every two weeks. The patient took a 4-week break from anabolic steroids every 12 weeks, in an attempt to limit the adverse side-effects. The patient denied ever having used oral or topical synthetic testosterone preparations and had always used sterile injecting equipment.

The patient stated that he had developed significant gynaecomastia and also suffered significant male pattern baldness since starting to use anabolic steroids. In addition, 2 years previously he had suffered a ruptured right biceps tendon while exercising, requiring a surgical repair and had a prolonged period of rehabilitation. There was no history of symptoms suggestive of cardiac or liver disease. The patient took no regular prescribed medications and reported an alcohol consumption of between 15 to 20 units per week.

General examination of the patient revealed a highly muscular and lean adult male. Moderate gynaecomastia was present, but there were no other signs of chronic liver disease. Examination of the cardiovascular and respiratory systems was unremarkable.

Please see below for the available results of blood tests taken prior to the patient's attendance at the clinic.

HbA1C	47 mmol / mol (reference < 42)
Total cholesterol	6.1 mmol / L (reference < 5.0)
Fasting LDL cholesterol	5.0 mmol / L (reference < 3.0)
Fasting HDL cholesterol	1.1 mmol / L (reference > 1.2)
Prolactin	490 mU / L (reference 80 - 400)
Luteinising hormone	<i>result pending</i>
Follicle-stimulating hormone	<i>result pending</i>

Testosterone	<i>result pending</i>
Epitestosterone	<i>result pending</i>

What pattern of results for the pending blood tests is consistent with the patient's anabolic steroid use?

	Elevated testosterone:epitestosterone ratio; normal luteinising hormone; normal follicle-stimulating hormone
	Suppressed testosterone:epitestosterone ratio; elevated luteinising hormone; suppressed follicle-stimulating hormone
	Suppressed testosterone:epitestosterone ratio; suppressed luteinising hormone; suppressed follicle-stimulating hormone
	Elevated testosterone:epitestosterone ratio; suppressed luteinising hormone; suppressed follicle-stimulating hormone
	Normal testosterone:epitestosterone ratio; elevated luteinising hormone; elevated follicle-stimulating hormone

Dashboard

Overall score: **0%**

1 -

□ Question 54 of 191



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	Elevated testosterone:epitestosterone ratio; suppressed luteinising hormone; suppressed follicle-stimulating hormone
	Normal testosterone:epitestosterone ratio; elevated luteinising hormone; elevated follicle-stimulating hormone

Dashboard

Overall score: **0%**

1 -

Question 55 of 191

A 19 year-old woman presents for review. Her past medical history includes hypertension, which is managed with ramipril and indapamide and 11-beta hydroxylase deficiency, which was identified at birth upon identifying cliteromegaly.

Which of the following is likely to be raised most markedly?

	17-OH pregnenolone
	Oestradiol
	11-Deoxycortisol
	17-OH progesterone
	Oestrone

Dashboard

Overall score: 0%

1 -

Question 55 of 191

□ □

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Dashboard

Overall score: **0%**

1 -

Question 55 of 191

□ □

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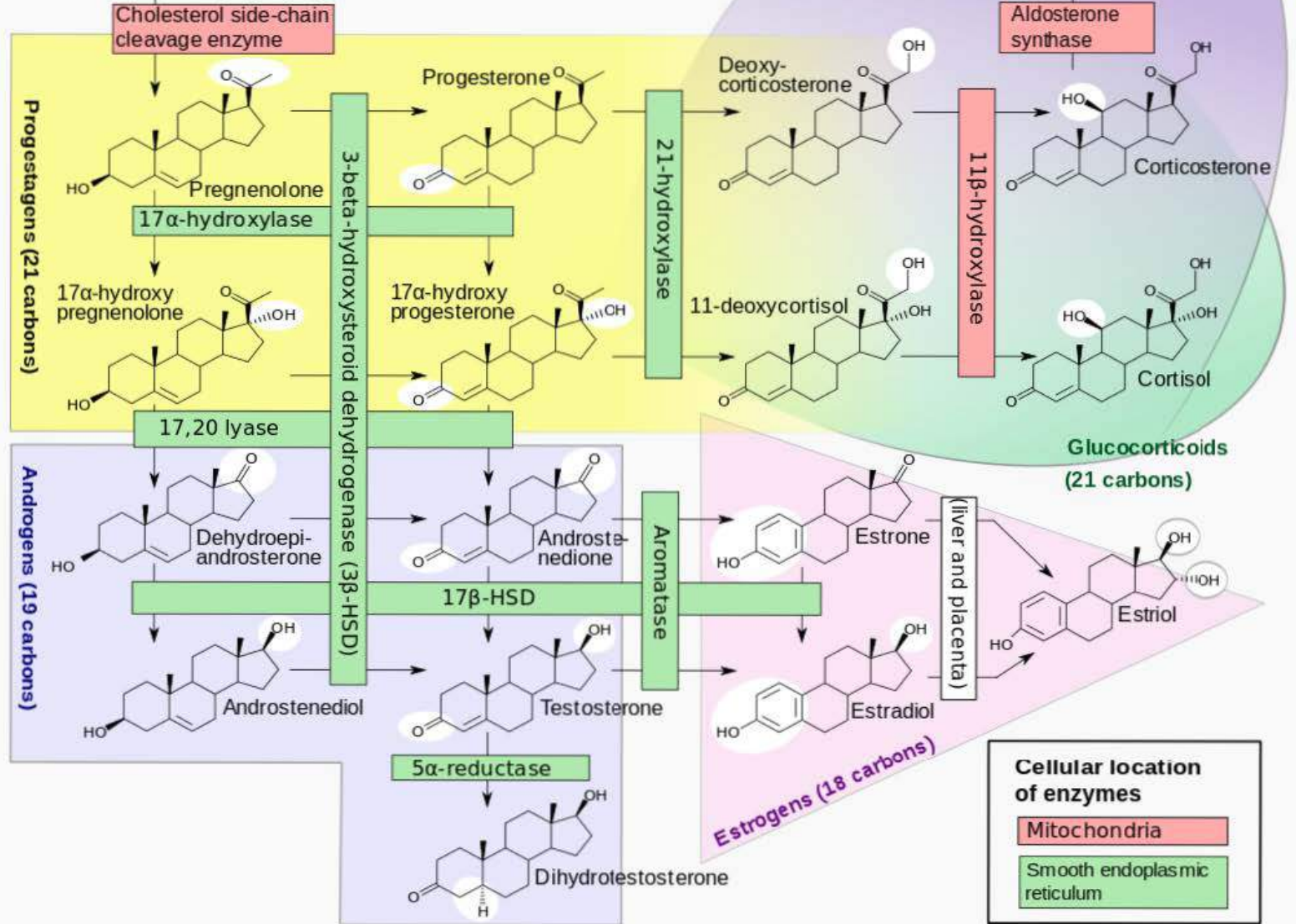
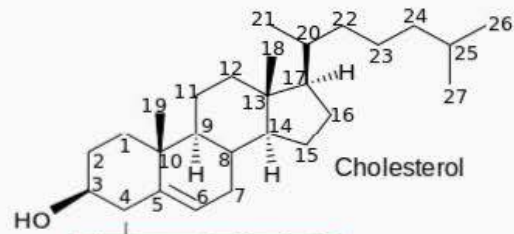
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	17-OH pregnenolone
	Oestradiol
	11-Deoxycortisol
	17-OH progesterone
	Oestrone

Dashboard

Overall score: 0%

1 -



 Question 56 of 191



A 27-year-old female presents with secondary amenorrhoea after stopping the oral contraceptive pill 6 months ago. She gets regular headaches and struggles to stand from seated or climb stairs.

On examination, milk could be expressed from the breasts and visual fields showed bilateral defects in the upper outer quadrants.

Prolactin	1080 mIU/L (NR<360)
FSH	0.1 IU/L (NR 1-11)
LH	0.2 IU/L (NR 20-75)
TSH	0.1 mIU/L (NR 0.3-6.0)
T4	8 pmol/L (NR 10-25)
9am cortisol	20 nmol/L (NR 140-700)

Pituitary MRI: 3cm pituitary mass with tenting of optic chiasm.

What is the next step in management?

	Bromocriptine
	Octreotide
	Stereotactic radiotherapy
	Trans-sphenoidal surgery
	Transcranial hypophysectomy

Question 56 of 191



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T4	8 pmol/L (NR 10-25)
9am cortisol	20 nmol/L (NR 140-700)

Pituitary MRI: 3cm pituitary mass with tenting of optic chiasm.

What is the next step in management?

	Bromocriptine
	Octreotide
	Stereotactic radiotherapy
	Trans-sphenoidal surgery
	Transcranial hypophysectomy

□ Question 57 of 191

□ □

A 55-year-old man with acromegaly is admitted electively for trans-sphenoidal pituitary surgery. The day after his operation, you are asked to prescribe additional fluids as his urine output has reached 10 litres in the past 24 hours. Urinalysis is unremarkable apart from a low specific gravity.

You organise the following investigations:

Serum Na ⁺	149 mmol/l
Serum K ⁺	3.8 mmol/l
Plasma Osmolality	299 mOsm/kg
24 hour Urine Osmolality	325 mOsm/kg

Which of the following is the most useful step in this patient's immediate management?

	Start demeclocycline
	Start desmopressin
	MRI imaging of the pituitary
	Ultrasound imaging of the kidneys
	Monitor fluid balance and replace losses

Dashboard

Overall score: 0%

1 -

□ Question 57 of 191

□ □

A 55-year-old man with acromegaly is admitted electively for trans-sphenoidal pituitary surgery. The day after his operation, you are asked to prescribe additional fluids as his urine output has reached 10 litres in the past 24 hours. Urinalysis is unremarkable apart from a low specific gravity.

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Which of the following is the most useful step in this patient's immediate management?

	Start demeclocycline
	Start desmopressin
	MRI imaging of the pituitary
	Ultrasound imaging of the kidneys
	Monitor fluid balance and replace losses

Dashboard

Overall score: **0%**

1 -

□ Question 58 of 191



A 20-year-old female presented to the accident and emergency department with severe abdominal pain, vomiting and lethargy. On further questioning she stated that she had been generally unwell for the last four months during which time she lost 10 Kg in weight and had been tired all the time.

Last month she has been diagnosed with hypothyroidism and was prescribed levothyroxine 50 mcg daily.

Her mother and sister have hypothyroidism and take thyroxine. On examination, she looks unwell and dehydrated.

Her pulse is 105 beats per minute and blood pressure is 70/40 mmHg

Her temperature is 37.6°C and BMI is 19 kg/m². Cardiovascular, respiratory and abdominal examination were normal. Investigations done last month showed:

Hb	9.5 g/dl
MCV	105 fl
Platelets	190 * 10 ⁹ /l
WBC	4.5 * 10 ⁹ /l

Serum free T4	8.5 pmol/l
Serum TSH	5.5 mU/l

While awaiting new investigations, what is the most appropriate immediate treatment for this patient?

	Intravenous glucose 10%
	Intravenous normal saline
	Intravenous normal saline and antibiotics

	Intravenous normal saline and hydrocortisone
	Intravenous thyroxine

Dashboard

Overall score: **0%**

1 -

Question 58 of 191



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	Intravenous glucose 10%
	Intravenous normal saline
	Intravenous normal saline and antibiotics

	Intravenous normal saline and hydrocortisone
	Intravenous thyroxine

Dashboard

Overall score: **0%**
1 -

Question 59 of 191

□ □

A 28-year-old woman has presented with a 5 month history of weight loss (despite an increase in appetite), tremor, loose bowels, and heat intolerance. She has otherwise been well and her only significant family history is that her brother has alopecia areata. She tells you that she had a positive pregnancy test last week and is awaiting her booking appointment. On examination, she appears anxious and her heart rate is 105 beats/minute. She has a tremor when her arms are outstretched and her eyes appear large. She also has a goitre. The rest of her examination is unremarkable. Her blood results find hyperthyroidism. Which of the following medications are most suited to treat her hyperthyroidism?

	Propylthiouracil
	Carbimazole
	Radioactive iodine
	Carbimazole and Levothyroxine
	Levothyroxine

Dashboard

Overall score: 0%

1 -

□ Question 59 of 191

□ □

A 28-year-old woman has presented with a 5 month history of weight loss (despite an increase in appetite), tremor, loose bowels, and heat intolerance. She has otherwise been well and her only significant family history is that her brother has alopecia areata. She tells you that she had a positive pregnancy test last week and is awaiting her booking appointment. On examination, she appears anxious and her heart rate is 105 beats/minute. She has a tremor when her arms are outstretched and her eyes appear large. She also has a goitre. The rest of her examination is unremarkable. Her blood results find hyperthyroidism. Which of the following medications are most suited to treat her hyperthyroidism?

	Propylthiouracil
	Carbimazole
	Radioactive iodine
	Carbimazole and Levothyroxine
	Levothyroxine

Dashboard

Overall score: **0%****1** -

Question 60 of 191

□ □

A 34 year-old woman presents for the first time as being 12 weeks pregnant. She has a past medical history of Hashimotos thyroiditis and hypertension. Her current medication includes ramipril 2.5mg and levothyroxine 100 mcg and recent blood tests reveal a TSH level of 1.0 mU/l.

What is the most appropriate management with regards to her levothyroxine treatment, given her recent diagnosis of pregnancy?

	Reduce her levothyroxine dose by an average of 25 mcg
	Increase her levothyroxine dose by an average of 100 mcg
	Increase her levothyroxine dose by an average of 25-50 mcg
	Reduce her levothyroxine dose by an average of 50 mcg
	Keep her levothyroxine dose unchanged

Dashboard

Overall score: 0%

1 -

□ Question 60 of 191

□ □

A 34 year-old woman presents for the first time as being 12 weeks pregnant. She has a past medical history of Hashimotos thyroiditis and hypertension. Her current medication includes ramipril 2.5mg and levothyroxine 100 mcg and recent blood tests reveal a TSH level of 1.0 mU/l.

What is the most appropriate management with regards to her levothyroxine treatment, given her recent diagnosis of pregnancy?

	Reduce her levothyroxine dose by an average of 25 mcg
	Increase her levothyroxine dose by an average of 100 mcg
	Increase her levothyroxine dose by an average of 25-50 mcg
	Reduce her levothyroxine dose by an average of 50 mcg
	Keep her levothyroxine dose unchanged

Dashboard

Overall score: **0%**

1 -

Question 61 of 191

□ □

A 48-year-old man who was diagnosed with type 2 diabetes mellitus presents for review. During his annual review he was noted to have the following results:

Total cholesterol	5.3 mmol/l
HDL cholesterol	1.0 mmol/l
LDL cholesterol	3.1 mmol/l
Triglyceride	1.7 mmol/l
HbA1c	6.4%

A QRISK2 score is calculated showing that he has a 12% 10-year risk of developing cardiovascular disease. His current medication is metformin 500mg tds. According to recent NICE guidelines, what is the most appropriate action?

	Simvastatin 40mg on
	Lifestyle advice, repeat lipid profile in 3 months
	Atorvastatin 40mg on
	Atorvastatin 20mg on
	Increase his metformin slowly to 1g tds

Dashboard

Overall score: 0%

1 -

Question 61 of 191

A 48-year-old man who was diagnosed with type 2 diabetes mellitus presents for review. During his annual review he was noted to have the following results:

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	Simvastatin 40mg on
	Lifestyle advice, repeat lipid profile in 3 months
	Atorvastatin 40mg on
	Atorvastatin 20mg on
	Increase his metformin slowly to 1g tds

Dashboard

Overall score: 0%

1 -

Question 61 of 191

A 48-year-old man who was
was noted to have the follow

Total cholesterol	5.3 mmol/L
HDL cholesterol	1.0 mmol/L
LDL cholesterol	3.1 mmol/L
Triglyceride	1.7 mmol/L
HbA1c	6.4%

A QRISK2 score is calculated as 10.5%. His current
medication is metformin 500mg tds. According to recent NICE guidelines, what is the most appropriate action?

	Simvastatin 40mg on
	Lifestyle advice, repeat lipid profile in 3 months
	Atorvastatin 40mg on
	Atorvastatin 20mg on
	Increase his metformin slowly to 1g tds

Dashboard

Overall score: 0%

1 -

Primary prevention

(10-year cardiovascular risk $\geq 10\%$ OR
most type 1 diabetics OR
CKD if eGFR $< 60\text{ml/min/m}^2$)

(kn

Atorvastatin 20mg od

(if non-HDL has not fallen by $\geq 40\%$ then
consider titrating up to 80mg)

Question 62 of 191

□ □

A 42-year-old woman was seen in clinic with a history of palpitation, tremor and weight loss. There is no other past medical history and she takes no regular medication.

On examination, she had a palpable goitre, exophthalmos, and a tremor of the out-stretched hands.

Thyroid function tests showed:

Free thyroxine (T4)	36 pmol/L (10-25)
Free triiodothyronine (T3)	15 pmol/L (5-10)
Thyroid-stimulating hormone	0.1mU/L (0.4-5.0)

Which of the following treatments should be prescribed initially to improve symptoms?

	Thyroidectomy
	Propanolol
	Radioiodine ablation
	Carbimazole
	Propylthiouracil

Dashboard

Overall score: 0%

1 -

Question 62 of 191

□ □

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Thyroid-stimulating hormone	0.1mU/L (0.4-5.0)

Which of the following treatments should be prescribed initially to improve symptoms?

	Thyroidectomy
	Propanolol
	Radioiodine ablation
	Carbimazole
	Propylthiouracil

Dashboard

Overall score: **0%**

1 -

Question 63 of 191



A 19-year-old pharmacy student is admitted to hospital after collapsing while at work. She denies biting her tongue or becoming incontinent during the collapse and was groggy but alert on coming around. At the time, a first aider measured her blood glucose to be 1.5 mmol/l. The patients mother reports that the patient has had 2 other episodes of collapse.

The students observations include a blood pressure of 127/77 mmHg, pulse of 81 bpm, and oxygen sats of 97%.

What is the best first-line investigation?

	Glucose, c-peptide and insulin
	Morning c-peptide
	Evening c-peptide
	Computed tomography (CT) scan of the abdomen
	Oral glucose tolerance test

Dashboard

Overall score: 0%

1 -

Question 63 of 191



A 19-year-old pharmacy student is admitted to hospital after collapsing while at work. She denies biting her tongue or becoming incontinent during the collapse and was groggy but alert on coming around. At the time, a first aider measured her blood glucose to be 1.5 mmol/l. The patients mother reports that the patient has had 2 other episodes of collapse.

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	Glucose, c-peptide and insulin
	Morning c-peptide
	Evening c-peptide
	Computed tomography (CT) scan of the abdomen
	Oral glucose tolerance test

Dashboard

Overall score: 0%

1 -

□ Question 64 of 191



A 75-year-old man with a history of high blood pressure, type 2 diabetes and hypercholesterolaemia was admitted to the emergency department with confusion. His daughter states that this has come on slowly over the last week and prior to this he had no memory problems. He currently takes metformin, ramipril, amlodipine and atorvastatin.

On examination, he smells strongly of urine and his mucous membranes appear dry. His abbreviated mental test score is 7 out of 10 and he is oriented in person but not in place or time. His heart rate is 95 per minute and his blood pressure is 105/62 mmHg. His chest is clear and has a soft ejection systolic murmur which does not radiate. His jugular venous pressure is not visible and he has mild ankle oedema. He has diffuse tenderness in the lower abdomen with no peritonism and normal bowel sounds. He has no focal neurology.

Investigation results are as follows:

Chest x-ray: Clear lung fields.

Urine dip:

Glucose	+++
Blood	+
Protein	+
Leucocytes	+
Nitrites	+
Ketones	+

Venous blood gas:

pH	7.43
BE	- 1.5 mmol/l
HCO ₃	23 mmol/l

Glucose	34 mmol/l
Lactate	2.5 mmol/l

Full blood count:

Hb	120 g/l
Platelets	445 * 10 ⁹ /l
WBC	13 * 10 ⁹ /l

Renal function:

Na ⁺	151 mmol/l
K ⁺	5 mmol/l
Urea	10 mmol/l
Creatinine	137 µmol/l
Glucose	32 mmol/l
Ketones	2 mmol/l

Which would be the most appropriate initial resuscitation measure?

	0.45% saline
	0.9% saline
	Fixed rate insulin and 0.9% saline
	Hartmann's
	Sliding scale insulin and 0.9% saline

Dashboard

Overall score: 0%

1 -

□ Question 64 of 191



A 75-year-old man with a history of high blood pressure, type 2 diabetes and hypercholesterolaemia was admitted to the emergency department with confusion. His daughter states that this has come on slowly over the last week and prior to this he had no memory problems. He currently takes metformin, ramipril, amlodipine and atorvastatin.

On examination, he smells strongly of urine and his mucous membranes appear dry. His abbreviated mental test score is 7 out of 10 and he is oriented in person but not in place or time. His heart rate is 95 per minute and his blood pressure is 105/62 mmHg. His chest is clear and has a soft ejection systolic murmur which does not radiate. His jugular venous pressure is not visible and he has mild ankle oedema. He has diffuse tenderness in the lower abdomen with no peritonism and normal bowel sounds. He has no focal neurology.

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Chest x-ray: Clear lung fields.

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Glucose	+++
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Ketones	+

Venous blood gas:

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	0.9% saline
	Fixed rate insulin and 0.9% saline
	Hartmann's
	Sliding scale insulin and 0.9% saline

Dashboard

Overall score: **0%**

1 -

□ Question 65 of 191



A 66-year-old male was admitted with agitation and confusion, worsening over the past 1 week. His past medical history includes hypertension, ischaemic heart disease and chronic back pain. His daughter noticed that he had lost about 1 stone in weight (currently weighs 71 kg), has been more tired over the last month and that he has been drinking a lot more water. This was associated with the development of urinary incontinence.

On examination, his heart rate was 108 beats/min, blood pressure was 95/42 mmHg, saturations were 94% on air and respiratory rate was 20/min. He is confused, with a Glasgow Coma Scale of 14 and appeared dehydrated.

Blood results are as follows:

Na ⁺	125 mmol/l
K ⁺	5.0 mmol/l
Urea	18 mmol/l
Creatinine	180 µmol/l
Blood glucose	34 mmol/l

Venous blood gas was done and showed the following:

pH	7.32
pCO ₂	4.6 kPa
pO ₂	6.1 kPa
HCO ₃	17mmol/l
BE	-3.6 mmol/l

Which is the most important treatment?

Intravenous 0.9% sodium chloride

	10 units of human actrapid stat
	Start insulin sliding scale at 6 units/hr
	Calcium gluconate
	Intravenous 1.8% sodium chloride

Dashboard

Overall score: **0%**

1 -

Question 65 of 191



A 66-year-old male was admitted with agitation and confusion, worsening over the past 1 week. His past medical history includes hypertension, ischaemic heart disease and chronic back pain. His daughter noticed that he had lost about 1 stone in weight (currently weighs 71 kg), has been more tired over the last month and that he has been drinking a lot more water. This was associated with the development of urinary incontinence.

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	Start insulin sliding scale at 6 units/hr
	Calcium gluconate
	Intravenous 1.8% sodium chloride

Dashboard

Overall score: **0%**

1 -

□ Question 66 of 191



A 37-year-old man attends endocrinology clinic for assessment of the unwanted effects of long-term anabolic steroid use. The patient had been a competitive bodybuilder, who had used anabolic steroids to enhance his training regime, but now stated that he had 'retired' from bodybuilding last week and so stopped using steroids. The patient was concerned about the long-term health consequences of his previous use.

The patient described a 10-year period of anabolic steroid use. Typically he would take a daily oral formulation of a synthetic testosterone supplemented by an intramuscular injection of a longer acting agent every few weeks. The patient would take breaks from anabolic steroid use intermittently throughout the year, to reduce unwanted effects and also to evade anti-doping testing arranged by the organisers of the competitions in which he competed. The patient stated that he had never shared or reused needles when injecting himself with anabolic steroids.

The patient reported a range of unwanted effects he had developed secondary to his anabolic steroid use. These included severe acne affecting the patient's face and chest, intermittent symptoms of gastrointestinal dysfunction, and male pattern baldness. When asked directly, the patient reported that he had suffered from erectile dysfunction and scrotal discomfort towards the end of his use of anabolic steroids. The patient did not report any other concerns, in particular, he denied symptoms associated with heart or liver disease. The patient had no other significant past medical history and disclosed being a former user of recreational drugs, including cocaine.

Examination of the patient's cardiovascular and respiratory symptoms was unremarkable except for moderate pitting oedema to the level of the mid-tibia bilaterally. Examination of the abdomen noted mild bilateral gynaecomastia but no other signs of chronic liver disease. The patient's testicular volume was estimated as 18 ml bilaterally. A brief mental state examination did not reveal any evidence of a significant mood or anxiety disorder.

HbA1C	47 mmol / mol (reference < 42)
Fasting LDL cholesterol	4.5 mmol / L (reference < 3.0)
Fasting HDL cholesterol	1.0 mmol / L (reference > 1.2)
Prolactin	501 mU / L (reference 80 - 400)
Luteinising hormone	1.4 IU / L (reference 1.8 - 8.6)
Follicle-stimulating hormone	1.2 mU / ml (reference 1.5 - 12.4)
Transthoracic	Normal systolic and diastolic function; no left ventricular hypertrophy; normal valvular

echocardiogram	function
----------------	----------

Which of the patient's unwanted effects will be irreversible with cessation of steroid use?

	Pitting oedema
	Erectile dysfunction
	Scrotal pain
	Male pattern baldness
	Gastrointestinal dysfunction

Dashboard

Overall score: **0%**

1 -

□ Question 66 of 191



A 37-year-old man attends endocrinology clinic for assessment of the unwanted effects of long-term anabolic steroid use. The patient had been a competitive bodybuilder, who had used anabolic steroids to enhance his training regime, but now stated that he had 'retired' from bodybuilding last week and so stopped using steroids. The patient was concerned about the long-term health consequences of his previous use.

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	Pitting oedema
	Erectile dysfunction
	Scrotal pain
	Male pattern baldness
	Gastrointestinal dysfunction

Dashboard

Overall score: **0%**
1 -

Question 67 of 191



A 32-year-old male presents with a sudden onset left sided weakness with new onset expressive dysphasia and dress apraxia. He has a seven year history of progressive cognitive impairment and seizures, lives in sheltered accommodation and was brought in after his relatives, who visit him on a weekly basis, noted a change from his baseline. The patient is a poor historian and could not remember the duration of symptoms. He reports a recent history of burning sensation when passing urine associated with increased frequency and reduced oral intake for the past four days. An MRI head demonstrates multiple areas of ischaemia within left and right cortex inconsistent with one single vascular territory. A urine dip is positive for leucocytes and nitrites, negative for ketones. A venous blood gas is taken:

pH	7.15
PaCO ₂	2.4 kPa
Bicarbonate	6 mmol/l
Lactate	18 mmol/l
Anion gap	16 mmol/l

What is the unifying diagnosis?

	MELAS
	Diabetic ketoacidosis
	Ingestion of antifreeze
	Severe dehydration secondary to urosepsis
	Metformin induced lactic acidosis

Question 67 of 191



A 32-year-old male presents with a sudden onset left sided weakness with new onset expressive dysphasia and dress apraxia. He has a seven year history of progressive cognitive impairment and seizures, lives in sheltered accommodation and was brought in after his relatives, who visit him on a weekly basis, noted a change from his baseline. The patient is a poor historian and could not remember the duration of symptoms. He reports a recent history of burning sensation when passing urine associated with increased frequency and reduced oral intake for the past four days. An MRI head demonstrates multiple areas of ischaemia within left and right cortex inconsistent with one single vascular territory. A urine dip is positive for leucocytes and nitrites, negative for ketones. A venous blood gas is taken:

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Bicarbonate	6 mmol/l
Lactate	18 mmol/l
Anion gap	16 mmol/l

What is the unifying diagnosis?

	MELAS
	Diabetic ketoacidosis
	Ingestion of antifreeze
	Severe dehydration secondary to urosepsis
	Metformin induced lactic acidosis

Question 68 of 191

□ □

A 52-year-old male presented with poor concentration, weight gain and tiredness for nine months duration. Three years ago he underwent resection of a pituitary tumour and was commenced on hydrocortisone 10 mg twice per day and thyroxine 150 g daily.

Examination reveals nothing significant.

Investigations show:

Serum free T4	12 pmol/L
Serum TSH	< 0.05 mU/L
Serum testosterone	7.3 nmol/L (10-30)
IGF-1	8.9 nmol/L (10-35)

What is the most appropriate treatment for this patient?

	Reduce the dose of thyroxine
	Reduce the dose of hydrocortisone
	Increase the dose of hydrocortisone
	Testosterone injection
	Growth hormone

Question 68 of 191

□ □

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	Reduce the dose of thyroxine
	Reduce the dose of hydrocortisone
	Increase the dose of hydrocortisone
	Testosterone injection
	Growth hormone

Dashboard

Question 69 of 191

□ □

A 45-year-old woman with chronic alcohol abuse admitted 3 days ago for nausea and severe diarrhoea now complains of peri-oral and finger tingling. She was admitted for hydration after 1 week of severe watery diarrhoea. She has been receiving intravenous hydration and dextrose but has not been able to take oral nutrition secondary to continued nausea. Her blood pressure is 130/74 mmHg, pulse is 68/min, and respiratory rate is 16/min. She is afebrile.

Physical examination is significant for facial twitching on percussion of her facial nerve just anterior to the ear, as well as the induction of carpal spasm after the inflation of a blood pressure cuff on her arm.

Which of the following is most likely to have caused these findings?

	Hyperuricaemia
	Hypernatraemia
	Hypomagnesaemia
	Hypophosphataemia
	Hypouricaemia

Dashboard

Overall score: 0%

1 -

□ Question 69 of 191

□ □

A 45-year-old woman with chronic alcohol abuse admitted 3 days ago for nausea and severe diarrhoea now complains of peri-oral and finger tingling. She was admitted for hydration after 1 week of severe watery diarrhoea. She has been receiving intravenous hydration and dextrose but has not been able to take oral nutrition secondary to continued nausea. Her blood pressure is 130/74 mmHg, pulse is 68/min, and respiratory rate is 16/min. She is afebrile.

Physical examination is significant for facial twitching on percussion of her facial nerve just anterior to the ear, as well as the induction of carpal spasm after the inflation of a blood pressure cuff on her arm.

Which of the following is most likely to have caused these findings?

	Hyperuricaemia
	Hypernatraemia
	Hypomagnesaemia
	Hypophosphataemia
	Hypouricaemia

Dashboard

Overall score: **0%****1** -

Question 70 of 191

□ □

A 57-year-old man with a 2 year history of hypertension is referred for further evaluation due to his blood pressure being difficult to control. The following results were obtained prior to commencing medications:

Na ⁺	148 mmol/l
K ⁺	3.2 mmol/l
Creatinine	130 µmol/l
Renin	102 (7-50 IU/mL ambulatory)
Aldosterone	1105 (N: 80-800 ng/dL ambulatory)
Renin: Aldosterone Ratio	10.8 (< 500)
Plasma Metanephrines	0.35 (<0.50 nmol/L)

These results are most consistent with which of the following:

	Congenital Adrenal Hyperplasia
	Phaeochromocytoma
	Cushing's disease
	Renovascular disease
	Primary hyperaldosteronism

Dashboard

Overall score: 0%

Question 70 of 191

□ □

A 57-year-old man with a 2 year history of hypertension is referred for further evaluation due to his blood pressure being difficult to control. The following results were obtained prior to commencing medications:

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Creatinine	130 µmol/l
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Renin:Aldosterone Ratio	10.8 (< 500)
Plasma Metanephrines	0.35 (<0.50 nmol/L)

These results are most consistent with which of the following:

	Congenital Adrenal Hyperplasia
	Phaeochromocytoma
	Cushing's disease
	Renovascular disease
	Primary hyperaldosteronism

Dashboard

Overall score: **0%**

Question 71 of 191

□ □

A 50-year-old man who drives a heavy goods vehicle comes to the diabetes clinic for review. Current medication for diabetes includes metformin 1g BD and gliclazide 160mg BD. His blood sugars have steadily increased over the past few months and his most recent HbA1c is 72 mmol/mol. He has increased in weight by 5kg over the past 12 weeks which he puts down to work, (driving his lorry for excessive periods). On examination his blood pressure is 155/88 mmHg, pulse is 75 beats per minute and regular. Abdomen is soft and non-tender, body mass index is 37 kg/m².

Investigations:

Na ⁺	140 mmol/l
K ⁺	5.0 mmol/l
Urea	7.1 mmol/l
Creatinine	110 µmol/l

Which of the following is the most appropriate next step?

	Add basal insulin
	Add mixed insulin
	Add pioglitazone
	Switch gliclazide to linagliptin
	Switch gliclazide to liraglutide

Dashboard

Overall score: 0%

Question 71 of 191

□ □

A 50-year-old man who drives a heavy goods vehicle comes to the diabetes clinic for review. Current medication for diabetes includes metformin 1g BD and gliclazide 160mg BD. His blood sugars have steadily increased over the past few months and his most recent HbA1c is 72 mmol/mol. He has increased in weight by 5kg over the past 12 weeks which he puts down to work, (driving his lorry for excessive periods). On examination his blood pressure is 155/88 mmHg, pulse is 75 beats per minute and regular. Abdomen is soft and non-tender, body mass index is 37 kg/m².

Investigations:

Na ⁺	140 mmol/l
K ⁺	5.0 mmol/l
Urea	7.1 mmol/l
Creatinine	110 µmol/l

Which of the following is the most appropriate next step?

	Add basal insulin
	Add mixed insulin
	Add pioglitazone
	Switch gliclazide to linagliptin
	Switch gliclazide to liraglutide

Dashboard

Overall score: **0%**

□ Question 71 of 191

□ □

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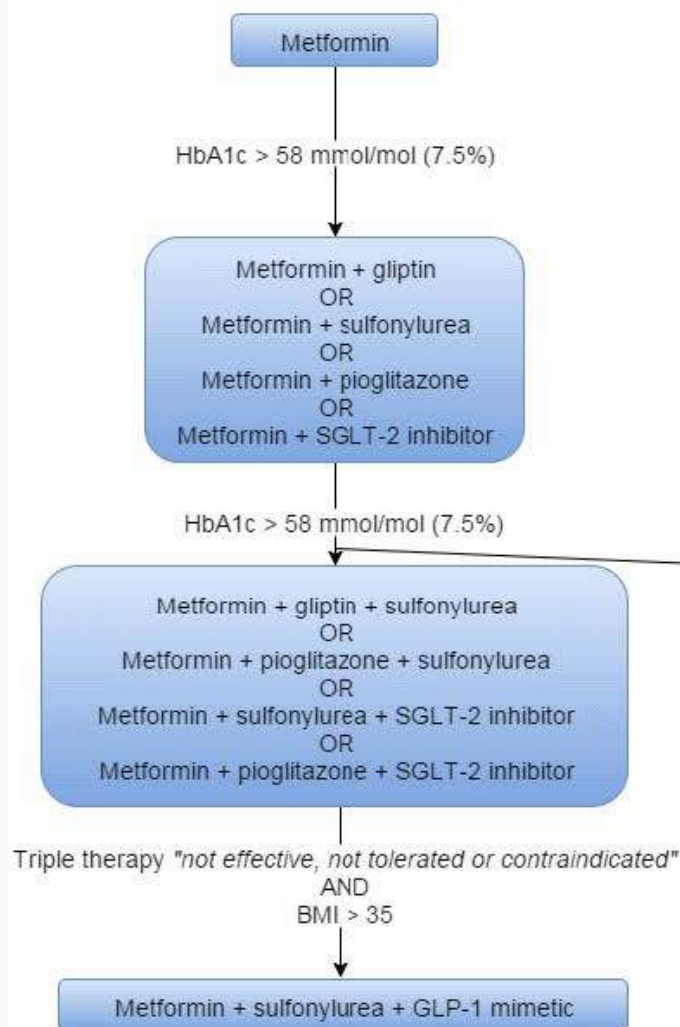
Investigations:

Na ⁺	140 mmol/l
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Urea	7.1 mmol/l
Creatinine	110 µmol/l

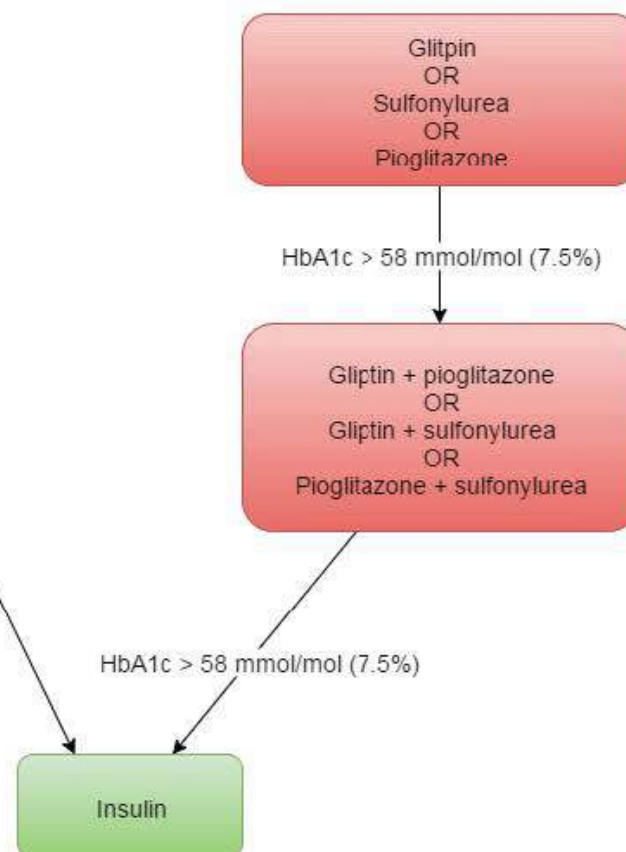
Which of the following is the most appropriate next step?

	Add basal insulin
	Add mixed insulin
	Add pioglitazone
	Switch gliclazide to linagliptin
	Switch gliclazide to liraglutide

Metformin



Metformin not tolerated or CI



Question 71 of 191

A 50-year-old man who drives a car with diabetes includes metformin in his diet for a few months and his most recent blood pressure which he puts down to work is 140/90 mmHg, pulse is 75 beats per minute.

Investigations:

Na ⁺	140 mmol/l
K ⁺	5.0 mmol/l
Urea	7.1 mmol/l
Creatinine	110 µmol/l

Primary prevention

(10-year cardiovascular risk $\geq 10\%$ OR
most type 1 diabetics OR
CKD if eGFR $< 60\text{ml/min/m}^2$)



Atorvastatin 20mg od

(if non-HDL has not fallen by $\geq 40\%$ then
consider titrating up to 80mg)

Which of the following is the most appropriate next step?

<input type="radio"/>	Add basal insulin
<input type="radio"/>	Add mixed insulin
<input type="radio"/>	Add pioglitazone
<input type="radio"/>	Switch gliclazide to linagliptin
<input checked="" type="radio"/>	Switch gliclazide to liraglutide

Dashboard

Overall score: 0%

Question 72 of 191

□ □

A 24 year-old man presents with a five week history of increasing thirst and frequency of urinating. The GP suspects diabetes and performs two fasting blood tests on separate days which reveal blood glucose results of 8.7 mmol/l and 9.2 mmol/l. Urinalysis does not detect any ketones or protein in the urine. The patient's mother had a diagnosis as type 1 diabetes at the age of 22 and his maternal grandfather and aunt also have type 1 diabetes. Due to the family history, the patient's c-peptide is measured and found to be consistently high on two occasions.

Given the likely diagnosis, what is the most appropriate first treatment for managing this condition?

	Gliclazide
	Metformin
	Pioglitazone
	Insulin
	Sitagliptin

Dashboard

Overall score: 0%

1 -

Question 72 of 191

□ □

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Given the likely diagnosis, what is the most appropriate first treatment for managing this condition?

	Gliclazide
	Metformin
	Pioglitazone
	Insulin
	Sitagliptin

Dashboard

Overall score: **0%**

1 -

Question 73 of 191



A 55-year-old male presented to his general practitioner with a 4-month history of sweating, fatigue and daytime tiredness. He attributed his tight rings to 'fluid retention' and has been experiencing worsening headaches and deterioration in his vision.

He was diagnosed with acromegaly and underwent surgery for this condition 1 month ago. He has been feeling well since and has not experienced any new symptoms.

Which of the following investigations would be most useful for monitoring the effect of his therapy?

	MRI pituitary
	Echocardiography
	Growth hormone levels
	Insulin-like growth factor levels
	Oral glucose tolerance test

Dashboard

Overall score: 0%

1 -

Question 73 of 191



A 55-year-old male presented to his general practitioner with a 4-month history of sweating, fatigue and daytime tiredness. He attributed his tight rings to 'fluid retention' and has been experiencing worsening headaches and deterioration in his vision.

He was diagnosed with acromegaly and underwent surgery for this condition 1 month ago. He has been feeling well since and has not experienced any new symptoms.

Which of the following investigations would be most useful for monitoring the effect of his therapy?

	MRI pituitary
	Echocardiography
	Growth hormone levels
	Insulin-like growth factor levels
	Oral glucose tolerance test

Dashboard

Overall score: 0%

1 -

□ Question 74 of 191



A 33-year-old female is brought into the emergency department as a stand-by. She has felt unwell for the past 2 weeks. She describes lethargy, light-headedness and occasional shortness of breath. More recently she developed urinary frequency and dysuria. She received a domiciliary visit from her general practitioner 2 days ago and was prescribed trimethoprim for a possible urinary tract infection.

On arrival, she appears pale and clammy. Her peripheries are cold. Her observations reveal oxygen saturations of 94% on air, respiratory rate 28/min, heart rate 117/min, blood pressure 65/30 mmHg.

She has a past medical history of type 1 diabetes, uterine fibroids and hypothyroidism.

Initial investigations reveal:

White cell count	17.8 *10 ⁹ /l
Haemoglobin	97 g/l
Mean cell volume (MCV)	103.7 fL
Sodium	134 mmol/l
Potassium	4.9 mmol/l
Urea	7.0 mmol/l
Creatinine	120 µmol/l
Bilirubin	45 µmol/l
Alanine transaminase (ALT)	1051 U/l
Albumin	16 g/l
C-reactive protein (CRP)	71 mg/dL
Glucose	9.1 mmol/l

Urinalysis: ++protein, ++blood, +++leukocytes, ++nitrites, trace ketones

She is given intravenous fluids. Her blood pressure is 82/45 mmHg after a total of 3 litres of fluids. She is started on intravenous amoxicillin and gentamicin.

What is the next step in her management?

	1000mls intravenous colloid fluid
	Intravenous hydrocortisone
	Intravenous noradrenaline
	Intravenous albumin
	Intravenous meropenem

Dashboard

Overall score: 0%

1 -

□ Question 74 of 191



A 33-year-old female is brought into the emergency department as a stand-by. She has felt unwell for the past 2 weeks. She describes lethargy, light-headedness and occasional shortness of breath. More recently she developed urinary frequency and dysuria. She received a domiciliary visit from her general practitioner 2 days ago and was prescribed trimethoprim for a possible urinary tract infection.

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Bilirubin	45 µmol/l
Alanine transaminase (ALT)	1051 U/l
Albumin	16 g/l
C-reactive protein (CRP)	71 mg/dL
Glucose	9.1 mmol/l

Urinalysis: ++protein, ++blood, +++leukocytes, ++nitrites, trace ketones

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	Intravenous hydrocortisone
	Intravenous noradrenaline
	Intravenous albumin
	Intravenous meropenem

Dashboard

Overall score: **0%**

1 -

Question 75 of 191

□ □

A 62-year-old woman with a history of type 2 diabetes comes to the clinic for review. She has a history of mild cardiac failure managed with ramipril and bisoprolol. Her current medication for diabetes is metformin 1g BD. On examination her blood pressure is 122/82 mmHg, pulse is 80 beats per minute and regular. There are bilateral basal crackles on auscultation of the chest, and pitting oedema of both ankles. Her body mass index is elevated at 33 kg/m².

HbA1c	73 mmol/mol
Creatinine	82 µmol/l

Which of the following is the most appropriate next step for managing glucose control?

	Empagliflozin
	Glipizide
	Liraglutide
	Pioglitazone
	Saxagliptin

Dashboard

Overall score: 0%

1 -

Question 75 of 191

□ □

A 62-year-old woman with a history of type 2 diabetes comes to the clinic for review. She has a history of mild cardiac failure managed with ramipril and bisoprolol. Her current medication for diabetes is metformin 1g BD. On examination her blood pressure is 122/82 mmHg, pulse is 80 beats per minute and regular. There are bilateral basal crackles on auscultation of the chest, and pitting oedema of both ankles. Her body mass index is elevated at 33 kg/m².

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	Empagliflozin
	Glipizide
	Liraglutide
	Pioglitazone
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Dashboard

Overall score: **0%**

1 -

□ Question 75 of 191

□ □

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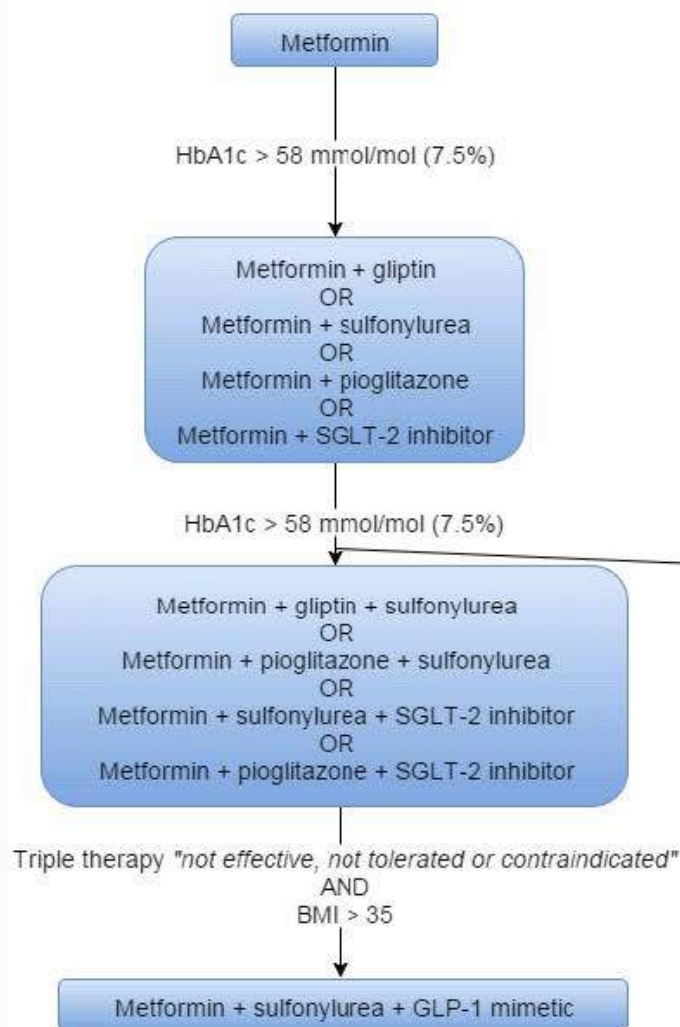
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	Glipizide
	Liraglutide
	Pioglitazone
	Saxagliptin

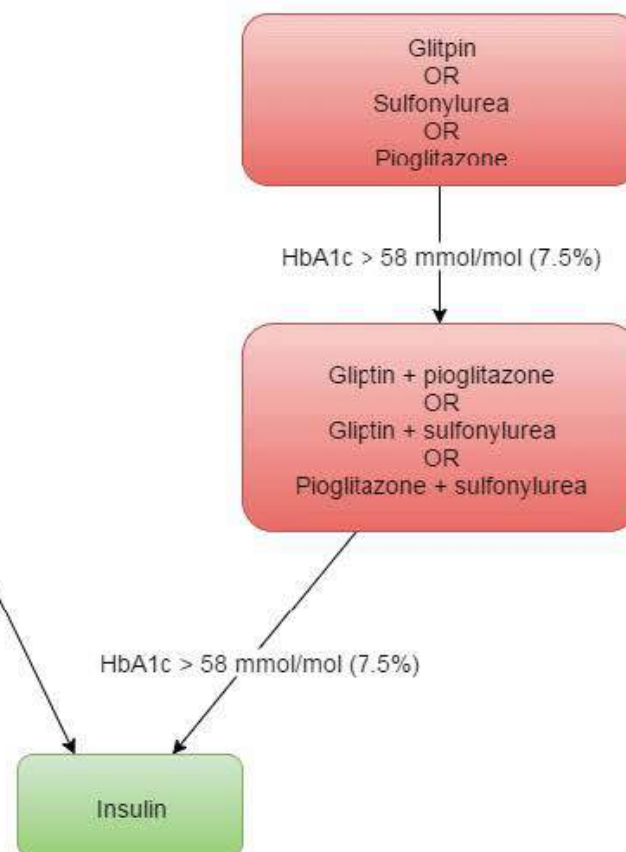
Dashboard

Overall score: **0%****1** -

Metformin



Metformin not tolerated or CI



Question 75 of 191

A 62-year-old woman with a history of heart failure managed with ramipril. Her blood pressure is 122/80 mmHg. On auscultation of the chest, an

HbA1c	73 mmol/mol
Creatinine	82 µmol/l

Which of the following is the

	Empagliflozin
	Glipizide
	Liraglutide
	Pioglitazone
	Saxagliptin

Primary prevention

(10-year cardiovascular risk $\geq 10\%$ OR
most type 1 diabetics OR
CKD if eGFR $< 60\text{ml/min/m}^2$)



Atorvastatin 20mg od

(if non-HDL has not fallen by $\geq 40\%$ then
consider titrating up to 80mg)

Dashboard

Overall score: **0%**

1 -

□ Question 76 of 191

□ □

A 22 year old lady presents over a year with mild-moderate, intermittent abdominal pain. She has felt low in mood over this period and also her periods have stopped. Her history includes two previous attacks of renal calculi formation managed conservatively. She had a car crash recently, where she says that the car just 'came out of nowhere'. She is intermittently getting global headaches that can be very severe in nature but are otherwise featureless. On prompting, she tells you that she has sometimes noticed a white nipple discharge on her clothing. She has had low blood pressure and several faints over this last year and after her GP discovered a low serum cortisol level he has started her on oral hydrocortisone and referred her to your clinic. On examination today her blood pressure 130/80. She has a blistering, red rash across her lower abdomen and back. Her abdomen is largely non-tender with no palpable organomegally or peritonism. Visual fields are reduced bitemporally. Her urine dipstick shows glycosuria. The remainder of the examination is unremarkable. Which of the following is likely to treat the underlying condition most effectively?

	Bisphosphonates
	Surgery
	Cabergoline
	Octreotide
	Insulin

Dashboard

Overall score: 0%

1 -

Question 76 of 191

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	Surgery
	Cabergoline
	Octreotide
	Insulin

Dashboard

Overall score: **0%**

1 -

□ Question 76 of 191

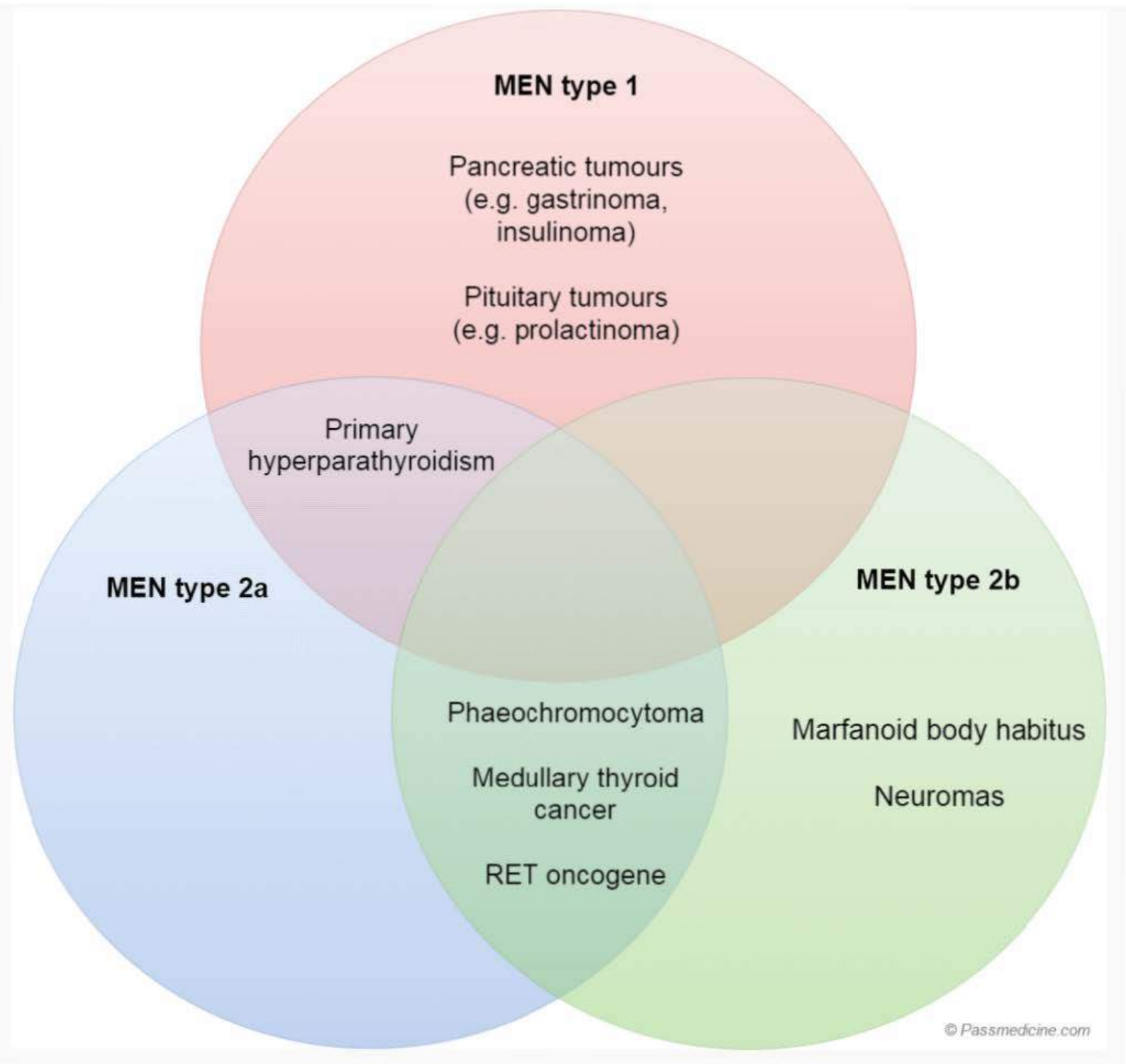
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	Bisphosphonates
	Surgery
	Cabergoline
	Octreotide
	Insulin

Dashboard

Overall score: **0%****1** -



Question 77 of 191



A 53 year old gentleman attends his General Practitioner for a 'Well Man Check'. He has a past medical history of hypertension which has been treated with ramipril for 4 years. As part of the screening the GP notes that the patient has been suffering from low back pain for the last couple of months. He has been taking paracetamol and ibuprofen that he has bought over the counter and this has eased his pain. His blood pressure today is 134/76 mmHg. His GP takes blood tests as part of the check and the results are shown below.

Hb	13.2 g/dl
Platelets	$312 \times 10^9/l$
WBC	$8.2 \times 10^9/l$

Na ⁺	138 mmol/l
K ⁺	6.6 mmol/l
Urea	6.2 mmol/l
Creatinine	114 μ mol/l

His GP notifies the patient immediately on seeing these results and refers him to the local Medical Assessment Unit. Where more tests are carried out.

Arterial Blood Gases:

pH 7.34
PaCO₂ 5.1kPa
PaO₂ 12kPa
HCO₃⁻ 20 mmol/l

Serum Chloride 120mmol/l

Urinalysis:

pH 4.8

Protein negative

Blood negative

Leukocytes negative

Glucose negative

What is the most likely diagnosis?

	Renal Tubular Acidosis type 1
	Renal Tubular Acidosis type 2
	Renal Tubular Acidosis type 3
	Renal Tubular Acidosis type 4
	NSAID induced nephropathy

Dashboard

Overall score: 0%

1 -

Question 77 of 191



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1 -

□ Question 77 of 191

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pH 4.8
Protein negative
Blood negative
Leukocytes negative
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What is the most likely diagnosis?

	Renal Tubular Acidosis type 1
	Renal Tubular Acidosis type 2
	Renal Tubular Acidosis type 3
	Renal Tubular Acidosis type 4
	NSAID induced nephropathy



□ Question 78 of 191



A 19-year-old woman presents to her GP with a 7 month history of weight loss, diarrhoea and palpitations. The diarrhoea is normal colour and over the last three months she has had roughly 2-3 bowel motions per day. The heart palpitations occur randomly throughout the day and night. She has also noticed that she has recently been getting episodes of feeling very hot and sweaty. She has no other past medical history and her only family history is a mother who has Hashimotos thyroiditis.

On examination, the patient is sweaty and her blood pressure is 130/80 mmHg, pulse is 102 bpm and regular, respiratory rate is 16/min and her oxygen SATs are 98% on air.

Blood tests are performed and reveal:

Hb	135 g/l
Platelets	220 * 10 ⁹ /l
WBC	7.1 * 10 ⁹ /l
Na ⁺	139 mmol/l
K ⁺	3.9 mmol/l
Urea	5.1 mmol/l
Creatinine	60 µmol/l
Free thyroxine (T4)	28 pmol/l
Thyroid stimulating hormone (TSH)	0.08 mu/l

A thyroid radioisotope scan is performed and reveals a globally reduced uptake.

What is the most likely diagnosis?

	Graves disease

	Thyrotoxicosis factitia
	Hashimotos disease
	De Quervains thyroiditis
	Atrophic thyroiditis

Dashboard

Overall score: **0%**
1 -

□ Question 78 of 191



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	Hashimotos disease
	De Quervains thyroiditis
	Atrophic thyroiditis

Dashboard

Overall score: **0%**
1 -

Question 78 of 191

A 19-year-old woman presents with diarrhoea. Her colour and palpitations occur randomly. She has episodes of feeling very hot and has Hashimoto's thyroiditis.

On examination, the patient's respiratory rate is 16/min and her heart rate is 100/min.

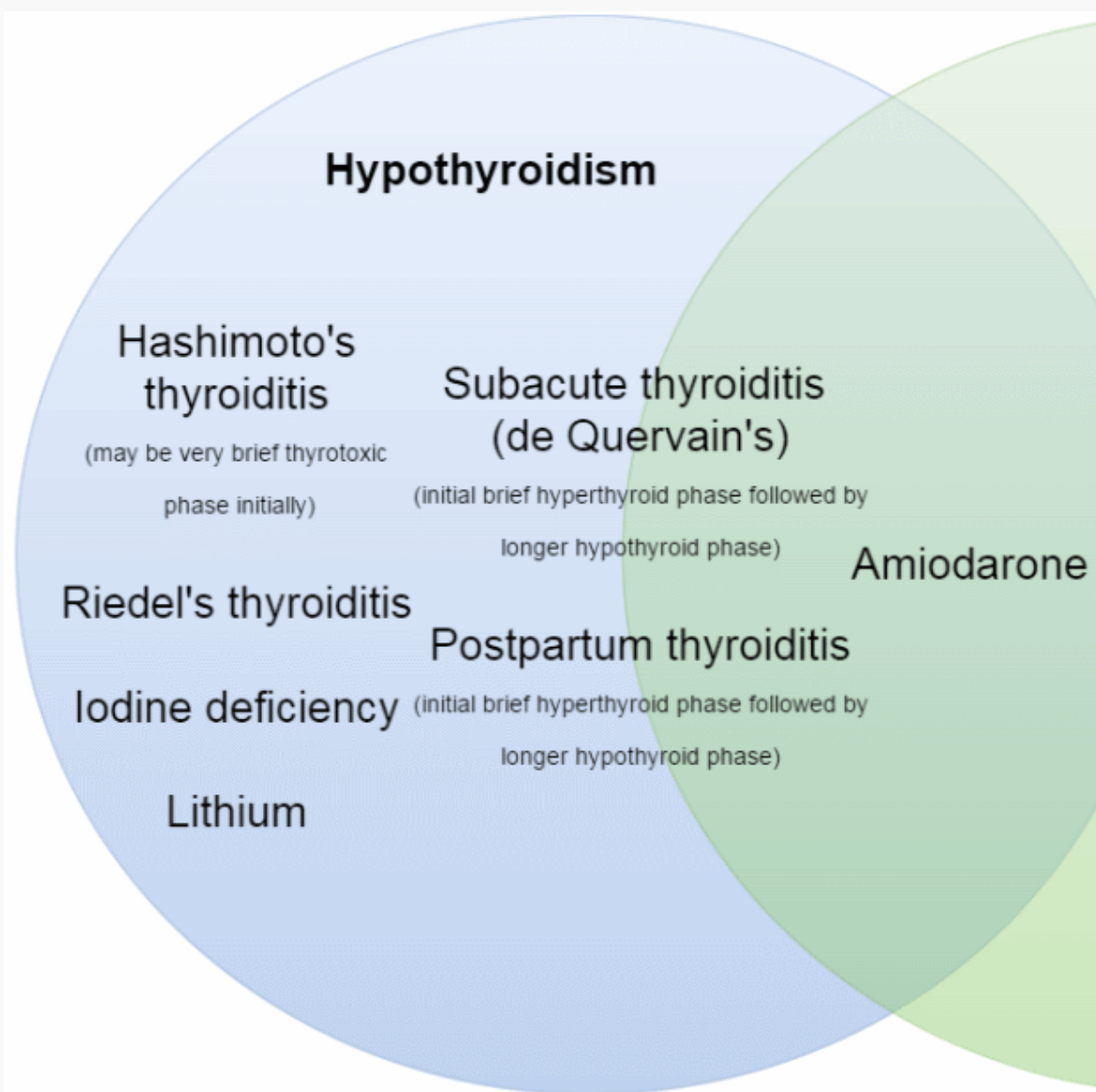
Blood tests are performed and the results are as follows:

Hb	
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A thyroid radioisotope scan is performed and reveals a globally reduced uptake.

What is the most likely diagnosis?

Graves disease



	Thyrotoxicosis factitia
	Hashimotos disease
	De Quervains thyroiditis
	Atrophic thyroiditis

Dashboard

Overall score: **0%**
1 -

Question 79 of 191



A 29-year-old female is admitted to the Emergency Department following an episode of collapse. She denies prodromal symptoms and woke up after an undetermined period to find herself lying face down on the ground. She has recently consulted her GP regarding feelings of generalised weakness, intermittent palpitations and dizziness.

Her past medical history is remarkable for hypothyroidism and rheumatoid arthritis, previously managed with infliximab, and complicated 3 months ago by a diagnosis of TB. Her regular medications include methotrexate, folic acid, levothyroxine, artificial tears, rifampicin, and isoniazid.

During the examination, the patient complains of recurrent palpitations. The cardiac monitor shows broad-complex tachycardia. Her blood pressure is stable at 117/68mmHg and she is given a bolus of amiodarone.

Her venous blood gas is as follows:

pH	7.31
pCO ₂	4.3 kPa
pO ₂	6.3 kPa
Na ⁺	137 mmol/l
K ⁺	2.1 mmol/l
Cl ⁻	114 mmol/l
iCa ²⁺	1.05 mmol/l
Glucose	5.4 mmol/l
HCO ₃ ⁻	15.6 mmol/l
BE	-9.5 mmol/l

Some additional investigations are requested:

Urine dipstick	pH 5.0 glucose ++ protein +
----------------	-----------------------------

XR chest	unremarkable
XR abdomen	normal bowel gas pattern, no evidence of abnormal renal calcification

What is the most likely cause of the metabolic abnormalities described?

	Addison's disease
	Fanconi syndrome
	Rheumatoid arthritis
	Sjogren's syndrome
	Liver cirrhosis

Dashboard

Overall score: 0%

1 -

□ Question 79 of 191



A 29-year-old female is admitted to the Emergency Department following an episode of collapse. She denies prodromal symptoms and woke up after an undetermined period to find herself lying face down on the ground. She has recently consulted her GP regarding feelings of generalised weakness, intermittent palpitations and dizziness.

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Dashboard

Overall score: **0%**

1 -

Question 79 of 191



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Her venous blood gas is as follows:

pH	7.31
pCO2	4.3 kPa
pO2	6.3 kPa
Na+	137 mmol/l
K+	2.1 mmol/l
Cl-	114 mmol/l
iCa2+	1.05 mmol/l
Glucose	5.4 mmol/l
HCO3	15.6 mmol/l
BE	-9.5 mmol/l

Some additional investigations are requested:

Urine dipstick	pH 5.0 glucose ++ protein +
XR chest	unremarkable
XR abdomen	normal bowel gas pattern, no evidence of abnormal renal calcification

What is the most likely cause of the metabolic abnormalities described?

	Addison's disease
	Fanconi syndrome
	Rheumatoid arthritis
	Sjogren's syndrome
	Liver cirrhosis



□ Question 80 of 191



A 60-year- old female presented with a six month history of polyuria, polydipsia and generalised aches and pains.

She is a known hypertensive for ten years and is taking bendroflumethiazide 2.5 mg daily. She has been taking calcium and vitamin D supplements for the last two years as she has a strong family history of osteoporosis.

On examination, her pulse rate is 80 beats per minute and her blood pressure is 150/90 mmHg. Cardiovascular, respiratory and abdominal examination were normal.

Investigations reveal:

Serum sodium	130 mmol/L
Serum potassium	3.1 mmol/L
Serum urea	7.7 mmol/L
Serum creatinine	88 mol/L
Serum corrected calcium	2.9 mmol/L
Phosphate	0.8 mmol/L
PTH	4.5 pmol/L (0.9-5.4)
Urinalysis	glycosuria ++

What is the most likely cause of this ladys symptoms?

	Primary hyperparathyroidism
	Vitamin D excess
	Bendroflumethizide induced hypercalcaemia

	Familial hypocalciuric hypercalcaemia
	Diabetes mellitus

Dashboard

Overall score: **0%**

1 -

□ Question 80 of 191



A 60-year- old female presented with a six month history of polyuria, polydipsia and generalised aches and pains.

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Phosphate	0.8 mmol/L
PTH	4.5 pmol/L (0.9-5.4)
Urinalysis	glycosuria ++

What is the most likely cause of this ladys symptoms?

	Primary hyperparathyroidism
	Vitamin D excess
	Bendroflumethizide induced hypercalcaemia

	Familial hypocalciuric hypercalcaemia
	Diabetes mellitus

Dashboard

Overall score: **0%**
1 -

Question 81 of 191

□ □

A 53-year-old woman comes for review in the general medical clinic. She was diagnosed with type 2 diabetes mellitus six months ago after having developed fatigue and polyuria. She also has hypothyroidism but no other comorbidities. She was started on metformin 500mg twice daily struggled to cope due to gastrointestinal side effects such as diarrhoea. What is the most appropriate action?

	Reduce to metformin 500mg once daily
	Change to dipeptidyl peptidase-4 inhibitor
	Trial of modified release metformin
	Change to sulfonylurea
	Change to pioglitazone

Dashboard

Overall score: 0%

1 -

□ Question 81 of 191

□ □

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Dashboard

Overall score: **0%**

1 -

Question 81 of 191

□ □

A 53-year-old woman comes for review in the general medical clinic. She was diagnosed with type 2 diabetes mellitus six months ago after having developed fatigue and polyuria. She also has hypothyroidism but no other comorbidities. She was started on metformin 500mg twice daily struggled to cope due to gastrointestinal side effects such as diarrhoea. What is the most appropriate action?

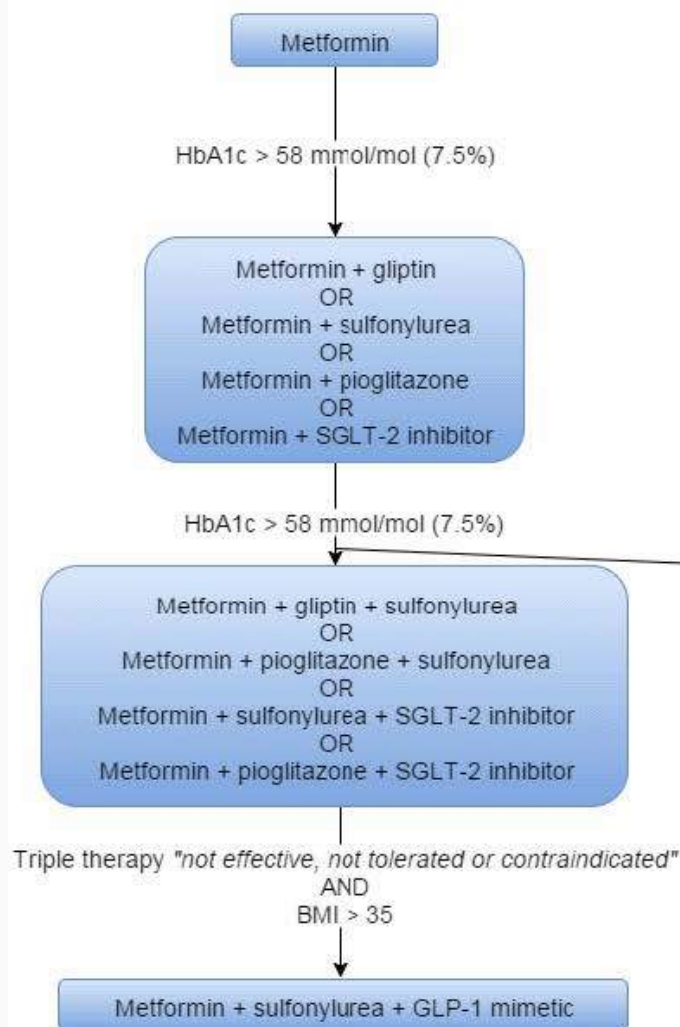
	Reduce to metformin 500mg once daily
	Change to dipeptidyl peptidase-4 inhibitor
	Trial of modified release metformin
	Change to sulfonylurea
	Change to pioglitazone

Dashboard

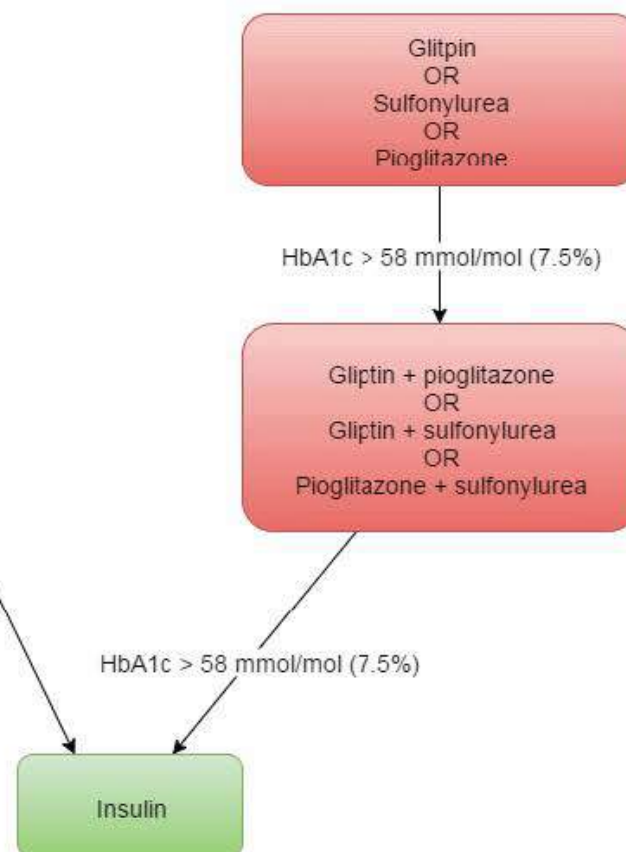
Overall score: **0%**

1 -

Metformin



Metformin not tolerated or CI



Question 81 of 191

A 53-year-old woman came six months ago after having been diagnosed with type 2 diabetes. She was started on metformin 500mg bd. What is the most appropriate next step in her management?

<input type="radio"/>	Reduce to metformin 250mg bd
<input type="radio"/>	Change to dipeptidyl peptidase-4 inhibitor
<input checked="" type="radio"/>	Trial of modified release insulin
<input type="radio"/>	Change to sulfonylurea
<input type="radio"/>	Change to pioglitazone

Primary prevention

(10-year cardiovascular risk $\geq 10\%$ OR
most type 1 diabetics OR
CKD if eGFR $< 60\text{ml/min/m}^2$)



Atorvastatin 20mg od

(if non-HDL has not fallen by $\geq 40\%$ then
consider titrating up to 80mg)

Dashboard

Overall score: **0%**

1 -

□ Question 82 of 191



You are asked to review a 55-year-old male surgical for the fourth time in seven days with persistent hyperkalaemia on his blood tests. He has been admitted for 5 weeks under the surgeons following AP resection of sigmoid carcinoma complicated by a superficial wound infection requiring a vacuum dressing. In all of the previous three medical reviews, the patient presented with a serum potassium of greater than 6.5 mmol/l and was treated with insulin-dextrose and calcium gluconate.

His past medical history includes type 2 diabetes mellitus, non-alcoholic steatohepatitis and neuromyelitis optica diagnosed 6 years ago and stable on the last review 2 months ago. His regular medications include gliclazide 80mg BD, Lantus (insulin glargine) 15 units OD, prednisolone 15 mg OD and baclofen 10mg QDS. During this review, he is alert and comfortable, blood pressure measures 135/82 mmHg, heart rate 90/min and sinus.

His blood tests are as follows:

Hb	121 g/l
Platelets	334 * 10 ⁹ /l
WBC	8.2 * 10 ⁹ /l

Na ⁺	136 mmol/l
K ⁺	6.9 mmol/l
Urea	7.5 mmol/l
Creatinine	110 µmol/l
CRP	4 mg/l
Renin	Raised
Aldosterone	Decreased

Blood gases show the following:

--	--

pH	7.24
PaO2 (air)	15.8 kPa
PaCO2	2.2 kPa
Bicarbonate	24 mmol/l

Urinary pH = 6.2

A repeat CT abdomen and pelvis demonstrates appropriate wounding healing with no local collections at the resection site. No other abdominal pathology is noted.

What is the most likely diagnosis?

<input type="radio"/>	Type 1 renal tubular acidosis
<input type="radio"/>	Type 2 renal tubular acidosis
<input type="radio"/>	Type 4 renal tubular acidosis
<input type="radio"/>	Waterhouse-Friderichsen syndrome
<input type="radio"/>	Addisonian crisis

Dashboard

Overall score: **0%**

1 -

Question 82 of 191

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Dashboard

Overall score: **0%**

1 -

Question 82 of 191

□ □

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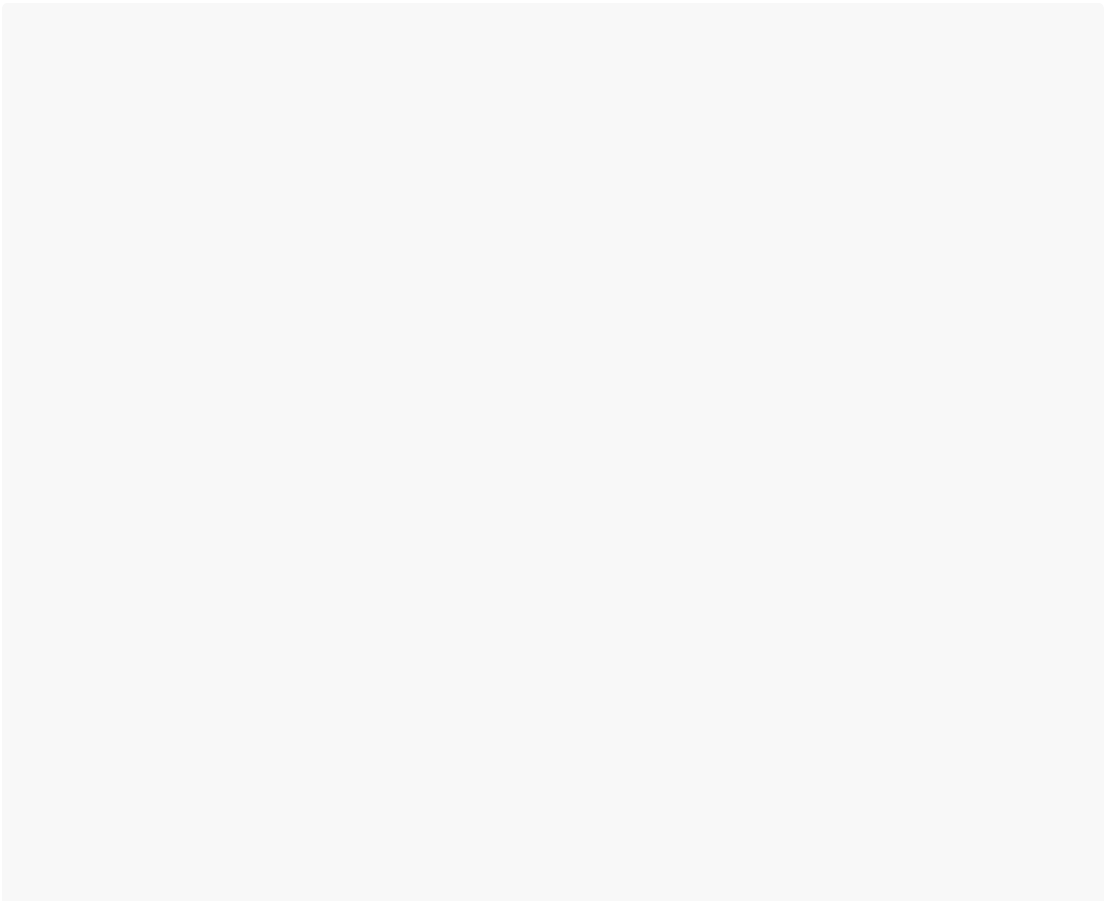
What is the most likely diagnosis?

	Type 1 renal tubular acidosis
	Type 2 renal tubular acidosis
	Type 4 renal tubular acidosis
	Waterhouse-Friderichsen syndrome

	Addisonian crisis
--	-------------------

Dashboard

Overall score: **0%**
1 -





Question 83 of 191

A 67-year-old Caucasian man presents with progressive deafness and difficulty chewing. He also states that his father and paternal uncles suffered from similar symptoms that required medication. On examination, it is noted that there is frontal bossing. Further investigations find an elevated alkaline phosphatase and a serum calcium at the upper end of the normal range. His other investigations are normal. What is the best first line treatment for this man?

<input type="checkbox"/>	Calcium supplementation
<input type="checkbox"/>	Bisphosphonates
<input type="checkbox"/>	Calcium and Vitamin D supplementation
<input type="checkbox"/>	Calcitonin
<input type="checkbox"/>	Surgery

Dashboard

Overall score: **0%**

1 -

Question 83 of 191

□ □

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	Calcium supplementation
	Bisphosphonates
	Calcium and Vitamin D supplementation
	Calcitonin
	Surgery

Dashboard

Overall score: **0%**

1 -

□ Question 83 of 191

□ □

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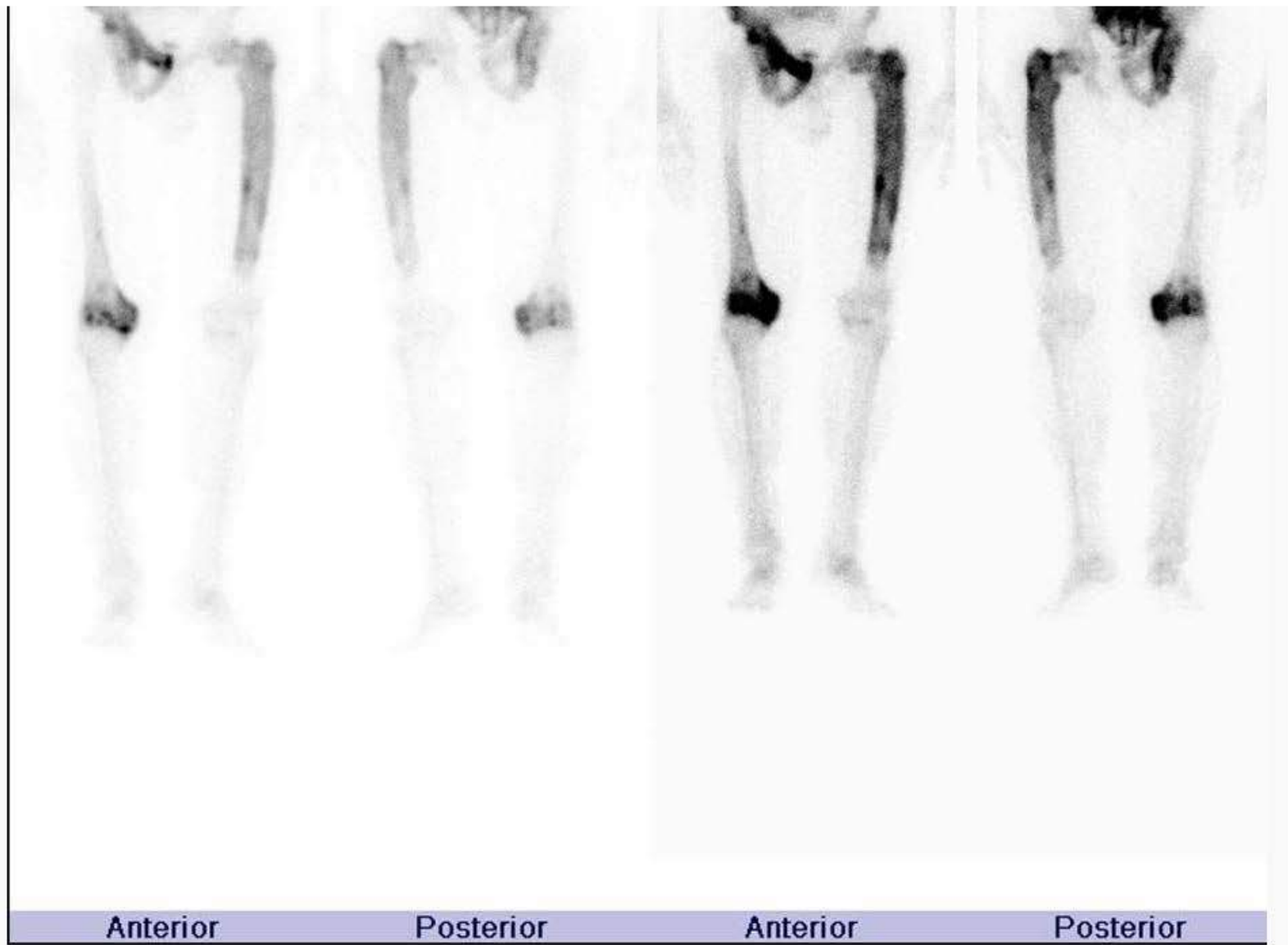
	Calcium supplementation
	Bisphosphonates
	Calcium and Vitamin D supplementation
	Calcitonin
	Surgery

Dashboard

Overall score: 0%

1 -





□ Question 83 of 191

□ □

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	Calcium supplementation
	Bisphosphonates
	Calcium and Vitamin D supplementation
	Calcitonin
	Surgery

Dashboard

Overall score: **0%****1** -



□ Question 83 of 191

□ □

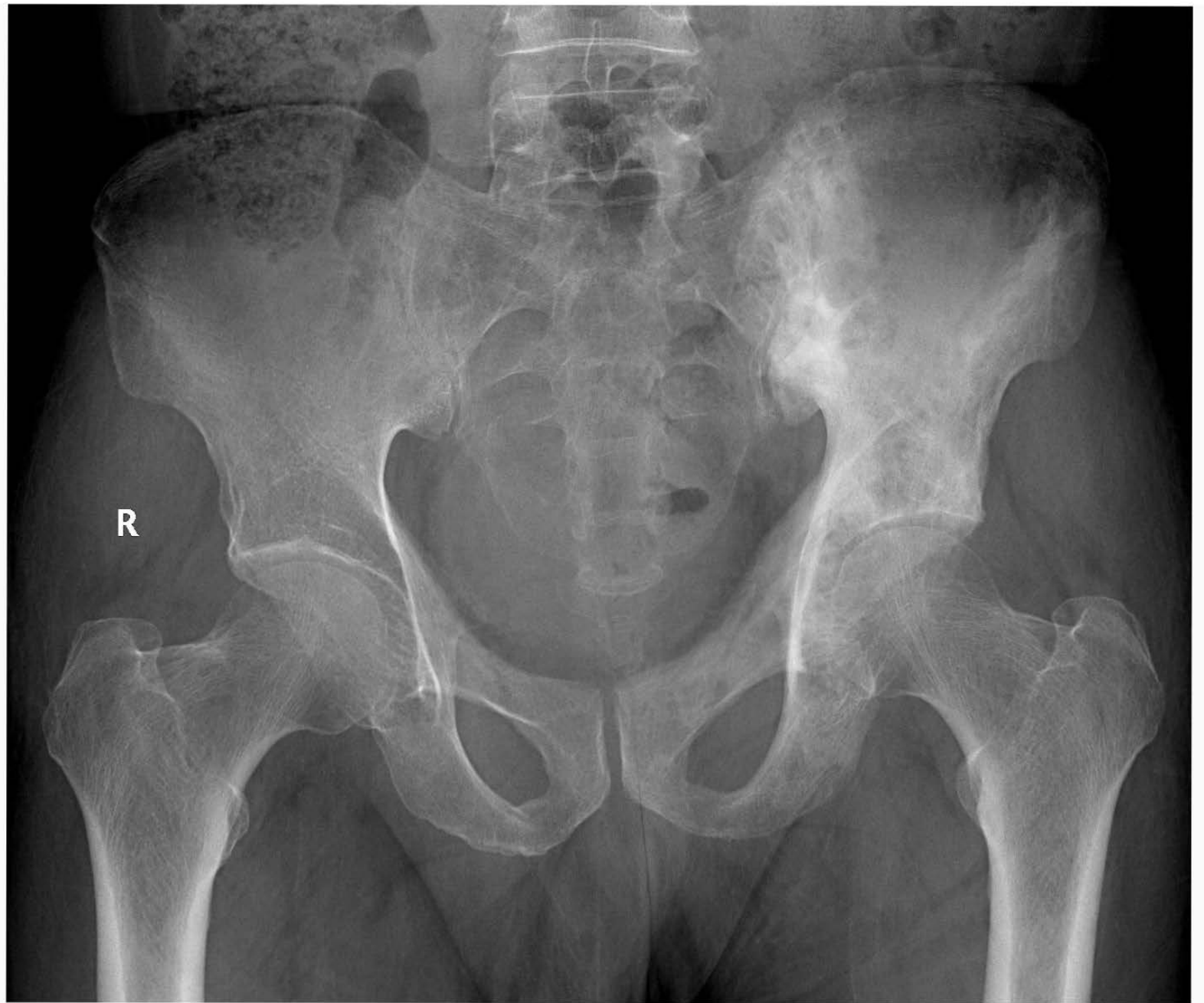
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	Calcium supplementation
	Bisphosphonates
	Calcium and Vitamin D supplementation
	Calcitonin
	Surgery

Dashboard

Overall score: 0%

1 -



□ Question 84 of 191



You are review a 38-year-old woman with type 1 diabetes mellitus in clinic. Her diabetes is currently controlled with a basal-bolus regime. She takes no other medication apart from citalopram 20mg od for depression. She was diagnosed with type 1 diabetes at the age of 13 years. Her most recent bloods show

Na ⁺	142 mmol/l
K ⁺	3.9 mmol/l
Urea	4.9 mmol/l
Creatinine	79 µmol/l

Total cholesterol	4.4 mmol/l
HDL cholesterol	1.2 mmol/l
LDL cholesterol	1.8 mmol/l
Triglyceride	1.3 mmol/l

Urine dip: No protein or blood

What is the most appropriate management with regards to lipid modification?

	Start atorvastatin 10mg on
	Start atorvastatin 20mg on
	Start atorvastatin 40mg on
	Perform a QRISK2 assessment
	Reassure her that lipid modification therapy is not required at this stage

□ Question 84 of 191



You are review a 38-year-old woman with type 1 diabetes mellitus in clinic. Her diabetes is currently controlled with a basal-bolus regime. She takes no other medication apart from citalopram 20mg od for depression. She was diagnosed with type 1 diabetes at the age of 13 years. Her most recent bloods show

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Triglyceride	1.3 mmol/l

Urine dip: No protein or blood

What is the most appropriate management with regards to lipid modification?

	Start atorvastatin 10mg on
	Start atorvastatin 20mg on
	Start atorvastatin 40mg on
	Perform a QRISK2 assessment
	Reassure her that lipid modification therapy is not required at this stage

Question 84 of 191

You are reviewing a 38-year-old female patient with type 1 diabetes on a basal-bolus regime. She takes insulin. Her last HbA1c was 7.5%. She has no other medical conditions. Her blood pressure is 120/80 mmHg. Her blood tests are as follows:

Na ⁺	142 mmol/l
K ⁺	3.9 mmol/l
Urea	4.9 mmol/l
Creatinine	79 µmol/l

Total cholesterol	4.4 mmol/l
HDL cholesterol	1.2 mmol/l
LDL cholesterol	1.8 mmol/l
Triglyceride	1.3 mmol/l

Urine dip: No protein or blood

What is the most appropriate management with regards to lipid modification?

<input type="radio"/>	Start atorvastatin 10mg on
<input checked="" type="radio"/>	Start atorvastatin 20mg on
<input type="radio"/>	Start atorvastatin 40mg on
<input type="radio"/>	Perform a QRISK2 assessment
<input type="radio"/>	Reassure her that lipid modification therapy is not required at this stage

Primary prevention

(10-year cardiovascular risk $\geq 10\%$ OR
most type 1 diabetics OR
CKD if eGFR $< 60\text{ml/min/m}^2$)



Atorvastatin 20mg od

(if non-HDL has not fallen by $\geq 40\%$ then
consider titrating up to 80mg)

Question 85 of 191

□ □

A 24 year-old woman presents to hospital after collapsing while out shopping. On taking her observations, she has a temperature 37.2°C, a pulse rate of 78 per minute which is regular and normal in character and a blood pressure of 164/92 mmHg. Heart sounds 1 and 2 were present with no added sounds and his chest was clear on auscultation. His abdomen was soft and non-tender with no organomegaly. Neurological examination was unremarkable. She has no past medical history of note and is on no regular medications.

Further blood tests reveal low renin and aldosterone levels, hypokalaemia and a serum bicarbonate of 30 mmol/l.

Which of the following is the most appropriate treatment for her condition?

	Angiotensin converting enzyme inhibitor therapy
	Bumetanide
	Potassium replacement
	Spironolactone
	Amiloride

Dashboard

Overall score: 0%

1 -

Question 85 of 191

□ □

A 24 year-old woman presents to hospital after collapsing while out shopping. On taking her observations, she has a temperature 37.2°C, a pulse rate of 78 per minute which is regular and normal in character and a blood pressure of 164/92 mmHg. Heart sounds 1 and 2 were present with no added sounds and his chest was clear on auscultation. His abdomen was soft and non-tender with no organomegaly. Neurological examination was unremarkable. She has no past medical history of note and is on no regular medications.

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Which of the following is the most appropriate treatment for her condition?

	Angiotensin converting enzyme inhibitor therapy
	Bumetanide
	Potassium replacement
	Spironolactone
	Amiloride

Dashboard

Overall score: **0%**

1 -

Question 86 of 191



A 56 year old male presents with progressive bilateral tinnitus of gradual onset over the past 3 months. He also reports worsening hearing during the same time period, intermittent headache and increasing lower limb oedema. He denies diplopia, vertiginous symptoms, dysphagia or dysarthria. He denies any urinary symptoms or weight loss. There is a past medical history of hypertension and insulin-dependent diabetes. The patient also reports a family history of prostate carcinoma, with both his father and uncle previously undergoing resections. On examination, cranial nerves are unremarkable except bilateral hearing loss. You note no limb weakness but significant spinal kyphosis. Heart sounds I and II are heard and no added sounds. Bibasal crackles are auscultated. His abdomen is soft and non-tender. His initial serum markers are as follow:

Platelets	264 * 10 ⁹ /l
WBC	9 * 10 ⁹ /l
Neuts	5.4 * 10 ⁹ /l

Na ⁺	142 mmol/l
K ⁺	4.3 mmol/l
Urea	7.8 mmol/l
Creatinine	90 µmol/l

Bilirubin	6 µmol/l
ALP	902 u/l
ALT	28 u/l
CRP	16 mg/l

Parathyroid hormone and vitamin D normal range. Which other biochemical marker will be abnormal?

	Corrected calcium
--	-------------------

	Gamma glutamyltransferase (GGT)
	Phosphate
	C-telopeptide (CTx)
	Prostate specific antigen (PSA)

Dashboard

Overall score: **0%**

1 -

□ Question 86 of 191



A 56 year old male presents with progressive bilateral tinnitus of gradual onset over the past 3 months. He also reports worsening hearing during the same time period, intermittent headache and increasing lower limb oedema. He denies diplopia, vertiginous symptoms, dysphagia or dysarthria. He denies any urinary symptoms or weight loss. There is a past medical history of hypertension and insulin-dependent diabetes. The patient also reports a family history of prostate carcinoma, with both his father and uncle previously undergoing resections. On examination, cranial nerves are unremarkable except bilateral hearing loss. You note no limb weakness but significant spinal kyphosis. Heart sounds I and II are heard and no added sounds. Bibasal crackles are auscultated. His abdomen is soft and non-tender. His initial serum markers are as follow:

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1 -

□ Question 86 of 191



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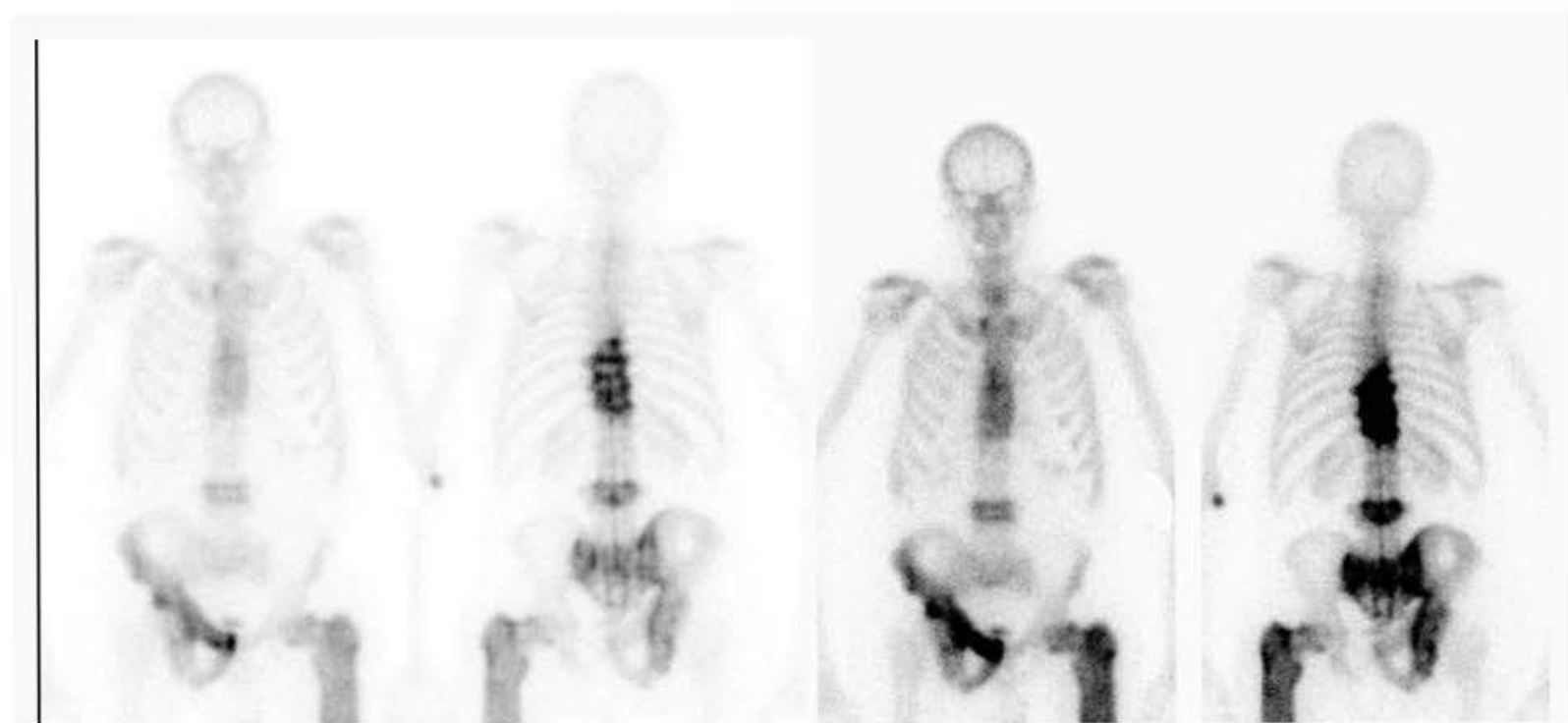
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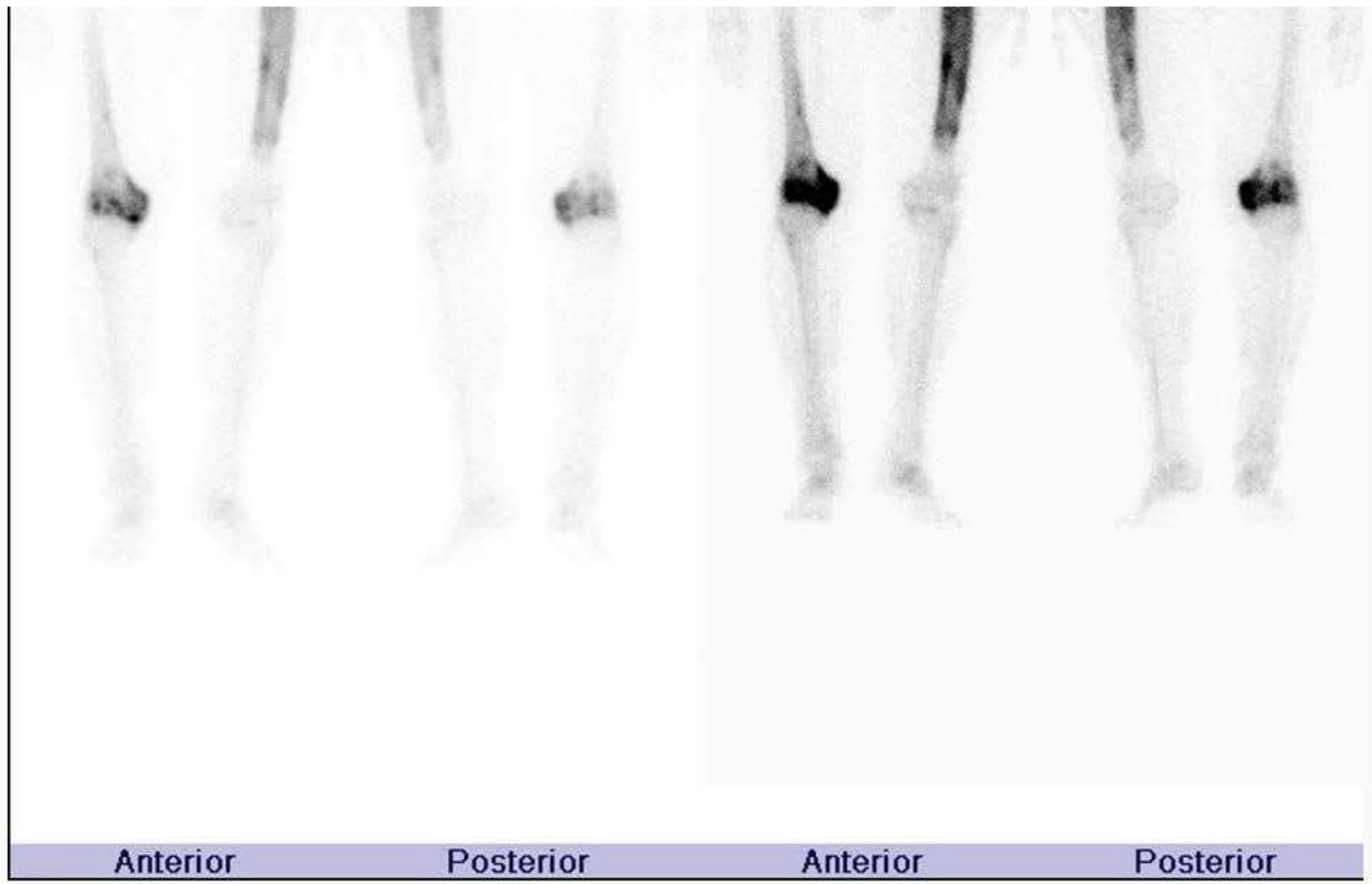
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Dashboard

Overall score: **0%**
1 -





□ Question 86 of 191



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1 -



□ Question 86 of 191



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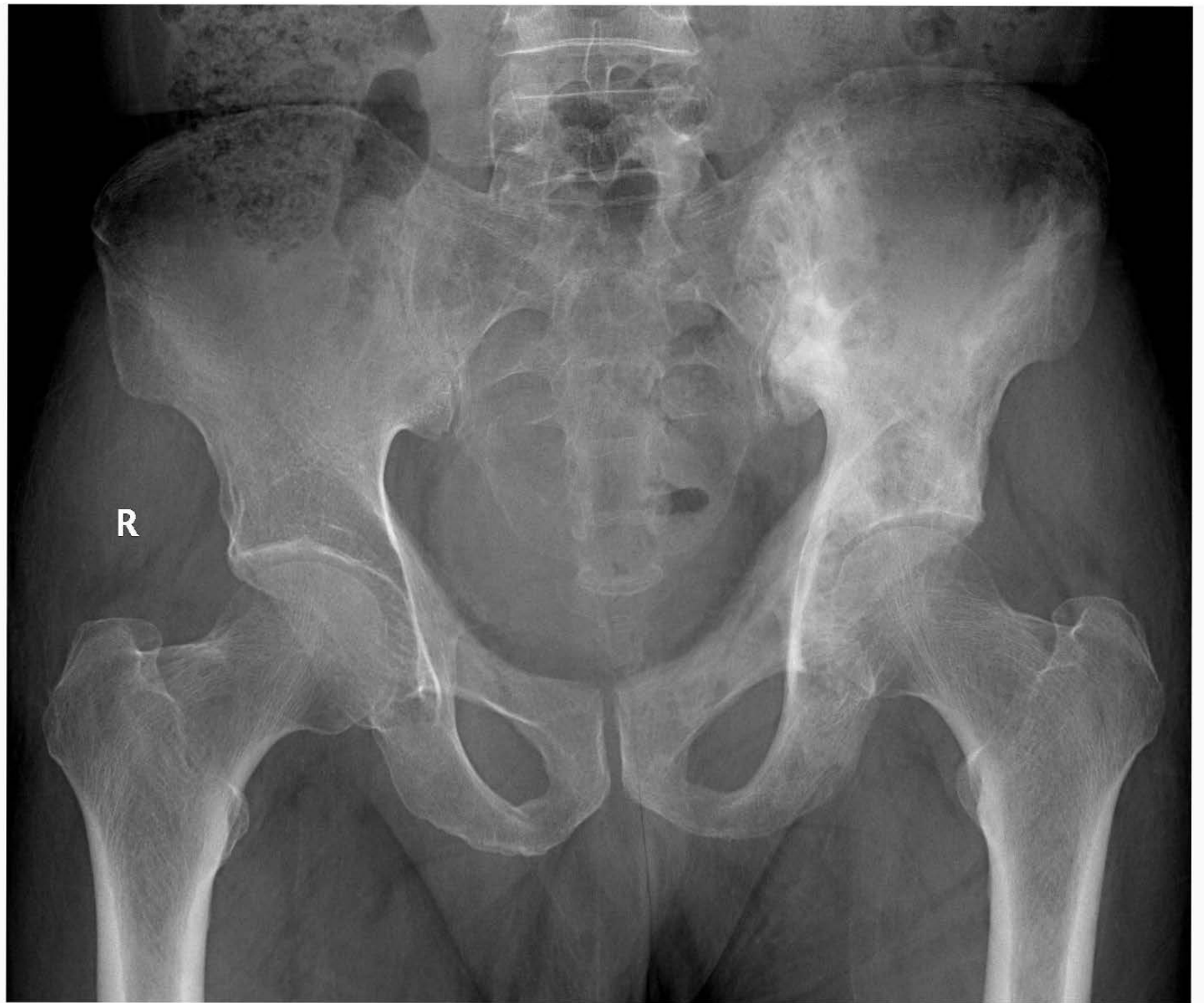
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	Phosphate
	C-telopeptide (CTx)
	Prostate specific antigen (PSA)

Dashboard

Overall score: **0%**
1 -



Question 87 of 191

□ □

A 39-year-old woman is referred to the outpatient department by her GP having been unsuccessfully treated with trimethoprim and nitrofurantoin for recurrent urinary tract infections. These have been occurring over the past six months. Over the last 2 days, the patient reports that urinating has become very painful and that the patient is now having difficulty urinating. The patient has a past medical history of type 2 diabetes mellitus. After completing a course of amoxicillin, the patient still complains of pain on urinating and pain in the lower abdomen. There is a family history of type 2 diabetes mellitus and the patient has a smoking history of 5 pack years, while drinking on average 15 units per week. An HbA1c test is performed and reveals a result of 82 mmol/mol.

What is the most likely organism causing the recurrent urinary tract infections?

	Candida
	Neisseria gonorrhoea
	Chlamydia trachomatis
	Trichomonas vaginalis
	Mycoplasma genitalium

Dashboard

Overall score: 0%

1 -

Question 87 of 191

□ □

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Dashboard

Overall score: **0%**

1 -

□ Question 87 of 191

□ □

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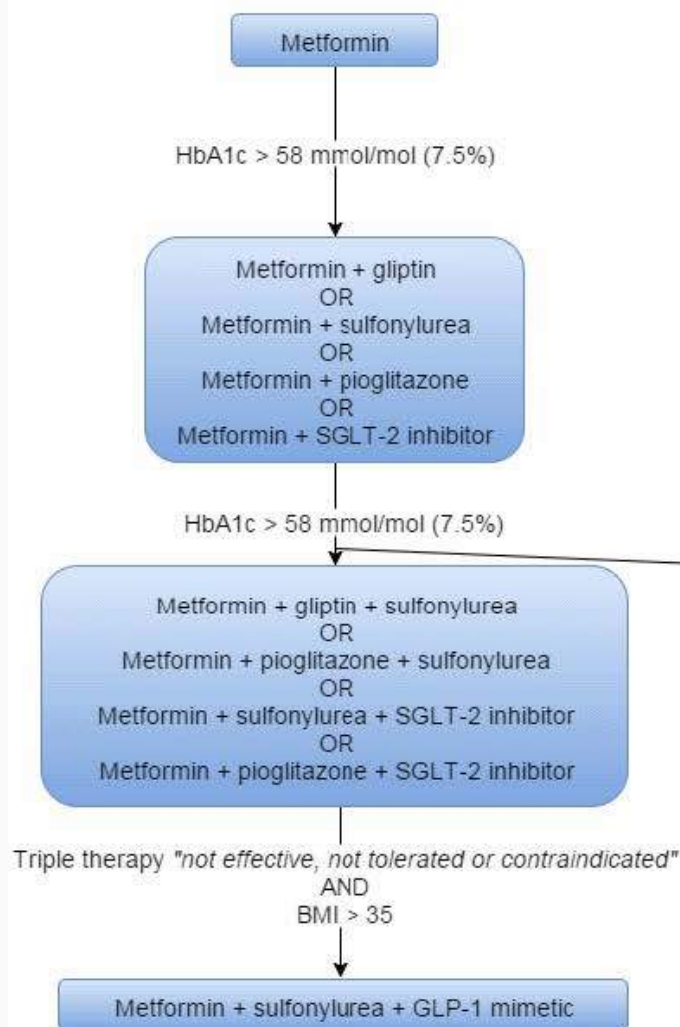
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	Neisseria gonorrhoea
	Chlamydia trachomatis
	Trichomonas vaginalis
	Mycoplasma genitalium

Dashboard

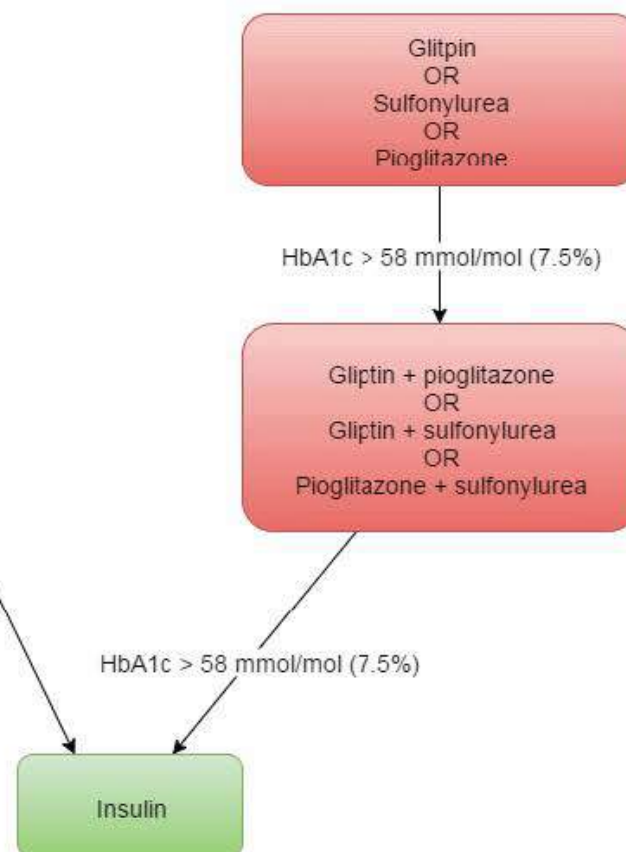
Overall score: **0%**

1 -

Metformin



Metformin not tolerated or CI



Question 87 of 191

A 39-year-old woman is referred to you with a 2-week history of urinary symptoms. She has been taking trimethoprim and nitrofurantoin for 2 months. Over the last 2 days she has been having difficulty urinating. She has been taking amoxicillin, the patient still has a urinary tract infection. She has type 2 diabetes mellitus and is on atorvastatin 20mg daily. An HbA1c test is performed and is 6.5%.

What is the most likely organism causing the urinary symptoms?

Candida

Neisseria gonorrhoea

Chlamydia trachomatis

Trichomonas vaginalis

Mycoplasma genitalium

Primary prevention

(10-year cardiovascular risk $\geq 10\%$ OR
most type 1 diabetics OR
CKD if eGFR $< 60\text{ml/min/m}^2$)



Atorvastatin 20mg od

(if non-HDL has not fallen by $\geq 40\%$ then
consider titrating up to 80mg)

Dashboard

Overall score: 0%

1 -

Question 88 of 191

□ □

A 62-year-old woman attends her GP complaining of weight gain, lethargy and hair loss. She denies any intercurrent illness. Thyroid function tests are performed and the results are as follows:

Thyroid stimulating hormone (TSH)	0.3 mu/l
Free T4	8 pmol/l

Which investigation is most likely to be diagnostic?

	Thyroid ultrasound
	Radio-iodine uptake scan
	Anti-thyroid peroxidase (TPO) antibodies
	Fine-needle aspiration of thyroid
	MRI pituitary gland

Dashboard

Overall score: 0%

1 -

Question 88 of 191

□ □

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Dashboard

Overall score: **0%**

1 -

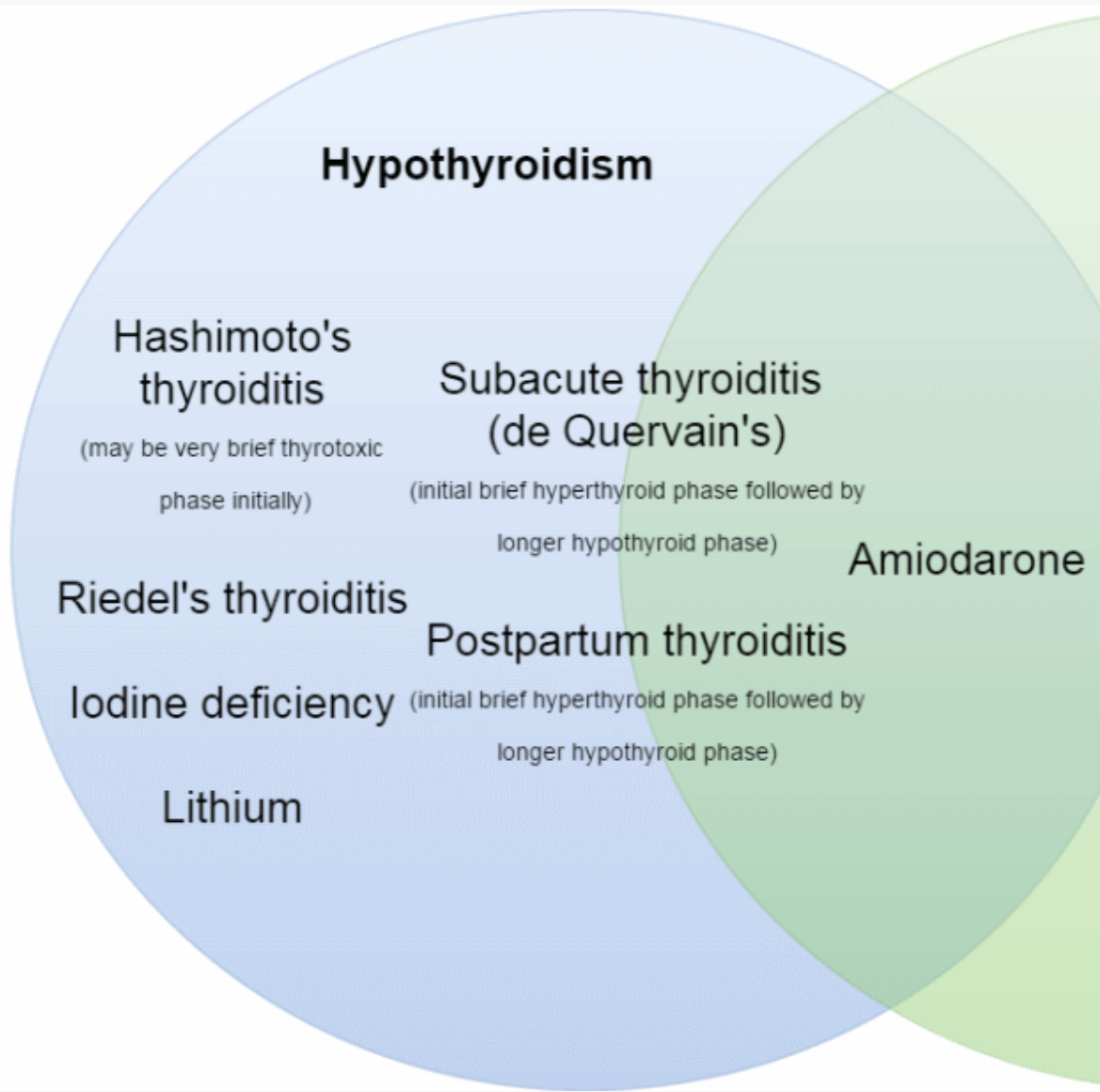
Question 88 of 191

A 62-year-old woman attends with weight loss and fatigue. She has a long-standing illness. Thyroid function tests are as follows:

Thyroid stimulating hormone
Free T4

Which investigation is most appropriate?

Thyroid ultrasound
Radio-iodine uptake
Anti-thyroid peroxidase antibodies
Fine-needle aspiration of thyroid
MRI pituitary gland



Dashboard

Overall score: 0%

1 -

□ Question 89 of 191

□ □

A 19-year-old woman with a history of type 1 diabetes is brought to the Emergency department with nausea and vomiting. there is no history of diarrhoea. She also has coeliac disease. She follows a gluten free diet and takes a basal bolus insulin regime with a usual HbA1c of 53 mmol/mol. On examination her blood pressure is 100/80 mmHg with a postural drop of 20 mmHg. Pulse is 88 beats per minute and regular. She looks dehydrated and tanned, she puts her tan down to weeks in the garden after her exams.

Investigations

Hb	102 g/l	Na ⁺	129 mmol/l
Platelets	189 * 10 ⁹ /l	K ⁺	5.0 mmol/l
WBC	10.9 * 10 ⁹ /l	Urea	9.9 mmol/l
Neuts	6.2 * 10 ⁹ /l	Creatinine	113 µmol/l
Lymphs	1.1 * 10 ⁹ /l	CRP	42 mg/l
Eosin	1.5 * 10 ⁹ /l		

Which of the following is the most important intervention with respect to her management?

	Fluid restriction
	IV anti-emetic
	IV hydrocortisone
	IV normal saline
	NG feeding

□ Question 89 of 191



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	IV anti-emetic
	IV hydrocortisone
	IV normal saline
	NG feeding

□ Question 90 of 191

□ □

A 72-year-old woman is recovering on the neurosurgical unit following a subdural haemorrhage. Four days earlier she underwent Burr hole surgery. You are asked to see her due to a persistently low sodium for the past three days. You note the following investigations:

Day 2 post-surgery

Serum Na ⁺	116 mmol/l
-----------------------	------------

Day 3 post-surgery

Serum Na ⁺	117 mmol/l
-----------------------	------------

Day 4 post-surgery

Serum Na ⁺	115 mmol/l
Urinary Na ⁺	25 mmol/l
Serum osmolality	280 mmol/l

Examination of the patient demonstrates dry mucous membranes and delayed capillary refill time.

What is the most likely diagnosis?

	SIADH
	Diabetes insipidus
	Cerebral salt wasting syndrome
	Renal tubular acidosis type IV
	Sheehan's syndrome

Question 90 of 191

□ □

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	Diabetes insipidus
	Cerebral salt wasting syndrome
	Renal tubular acidosis type IV
	Sheehan's syndrome

□ Question 91 of 191

□ □

A 28-year-old male with a history of epilepsy, for which he is taking carbamazepine and has not had any seizures for the last two years, presents with irritability and nausea for the last 2 weeks. His girlfriend says that he is often confused and seems to be lost most of the time. He takes alcohol occasionally and smokes ten to twelve cigarettes per day.

On examination, he is irritable but conscious and alert. Clinical examination revealed eczema over the face, shins and extensor surfaces of the forearms and a tattoo on the right shoulder. There was no evidence of any peripheral oedema.

Lab reports were as follows:

Hb	150 g/l
MCV	81 fl
MCH	31 pg
WBC	$9 \times 10^9/l$
Plt	$250 \times 10^9/l$
Urea	3.2 mmol/l
Creatinine	75 $\mu\text{mol/l}$
9:00 am Cortisol	345 nmol/l (170 700 nmol/l)
TSH	2.4 mU/l
Total T4	102 nmol/l (68 174 nmol/l)
Na+	119 mmol/l
K+	4.2 mmol/l

Which of the following would be the most appropriate initial management option?

	Fluid restriction to 500 - 1000 ml daily

	Demeclocycline 600 - 1200 mg daily
	IV hypertonic saline
	Intranasal desmopressin twice daily
	Hydrochlorothiazide 12.5 mg daily

Dashboard

Overall score: **0%**

1 -

□ Question 91 of 191



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	Hydrochlorothiazide 12.5 mg daily

Dashboard

Overall score: **0%**
1 -

□ Question 92 of 191



A 23-year-old Malaysian man presented to the emergency department with sudden onset right arm weakness that came on earlier in the morning after waking up. He denies any slurring of his speech. He has had one previous episode a month ago but that episode involved mild right leg weakness which resolved after 30 minutes, this time he is anxious as he was unable to move his arm and it has not resolved after 2 hours. His past medical history includes Grave's disease, and he takes carbimazole 20mg twice daily, however, he admits he has not been taking his carbimazole for the past week as he just returned from a month long holiday and had run out of medication.

On examination his temperature was 37.5°C, heart rate was 84 bpm, blood pressure was 114/68 mmHg, respiratory rate was 18 breaths per minute, and oxygen saturation was 98% on air. There was a fine tremor in both hands. Neurological examination revealed flaccid paralysis of the right arm, affecting the extensor muscles more than the flexor muscles (power 2/5 in the shoulder extensors). Reflexes and sensation to soft touch were normal. There was no disturbance of speech or facial asymmetry. There was a palpable smooth thyroid goitre in the midline of the neck.

C Reactive protein	6 mg/l
Haemoglobin	156 g/l
White cell count	$6.6 \times 10^9/L$
Na+	145 mmol/l
K+	3.1 mmol/l
Urea	5.2 mmol/l
Creatinine	78 $\mu\text{mol/l}$
Corrected calcium	2.42 mmol/l
Thyroid stimulating hormone (TSH)	<0.03 $\mu\text{U/ml}$ (Reference range 0.3 - 4.0 $\mu\text{U/ml}$)
Free T4	3.14 ng/dL (Reference range 0.7 - 1.4ng/dL)
Free T3	1.44ng/dL (Reference range 0.2 - 0.5ng/dL)

What is the next most appropriate management step?

	Computer Tomography scan (CT) of the head
	Hydrocortisone
	Fludrocortisone
	Carbimazole
	Intravenous potassium chloride

Dashboard

Overall score: **0%**
1 -

□ Question 92 of 191



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	Hydrocortisone
	Fludrocortisone
	Carbimazole
	Intravenous potassium chloride

Dashboard

Overall score: **0%**
1 -

□ Question 93 of 191

□ □

A 42-year-old man has been diagnosed with diabetes following a resection for chronic pancreatitis. He has been initiated on insulin therapy and comes to the clinic to discuss a target HbA1c. His GP has been striving for a target HbA1c of 42, although the patient has pushed back, saying that this is resulting in significant hypoglycaemia. Clinical examination is unremarkable, his blood pressure is 142/82 mmHg, pulse is 80 and regular. His chest is clear. He is thin with a midline scar on his abdomen, his body mass index is 21 kg/m².

Which of the following is an appropriate target HbA1c for him?

	31
	37
	42
	48
	53

Dashboard

Overall score: 0%

1 -

□ Question 93 of 191

□ □

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Dashboard

Overall score: **0%****1** -

□ Question 93 of 191

□ □

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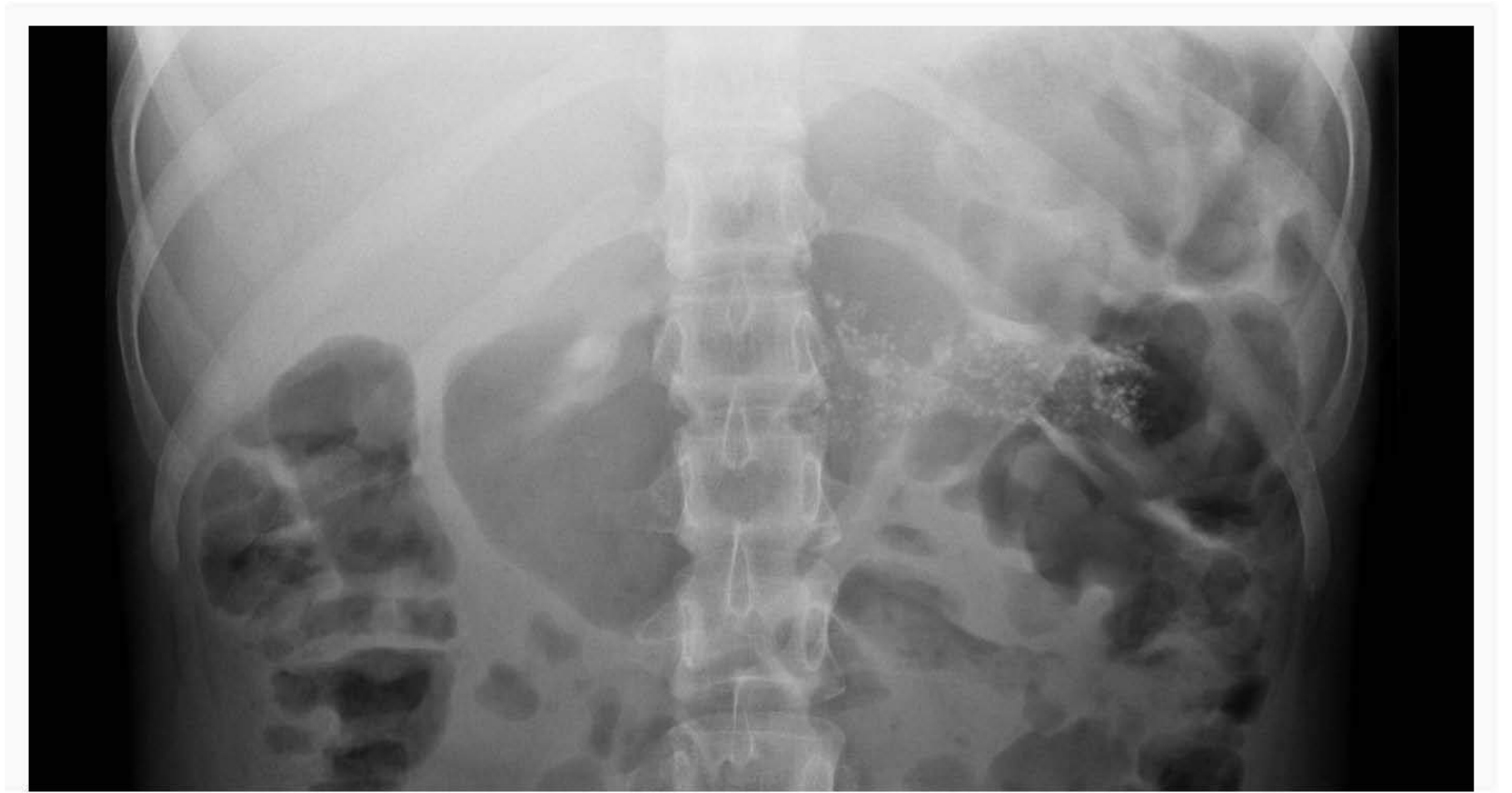
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Dashboard

Overall score: 0%

1 -





□ Question 93 of 191

□ □

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Which of the following is an appropriate target HbA1c for him?

31
37
42
48
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Dashboard

Overall score: 0%

1 -



□ Question 94 of 191



A 24 year old female patient attends the young persons diabetes clinic for a routine follow up. She developed type 1 diabetes mellitus 4 years ago, presenting in DKA at that time. Since then she has been well controlled on carbohydrate counting and basal bolus insulin. Since starting treatment with insulin she has developed vitiligo on her hands and feet which causes her some distress. She is very aware of her skin pigmentation due to her vitiligo and reports on this encounter that she feels her skin in her armpits has gotten darker. She also reports vague symptoms of nausea, weight loss and muscle weakness. She has had to stop playing badminton with her friends due to occasional light-headedness and having fainted once. Her blood sugar diary shows an early morning (fasting) level of 7.1. The highest sugar level recorded is 13.2 with the occasional dip below 4.0.

Examination reveals hyperpigmentation of the axilla bilaterally. There is vitiligo present in both hands and feet but this is consistent with previous examinations. Abdominal examination reveals generalised tenderness with no guarding, some abdominal striae are seen.

Some simple investigations are carried out

Blood Pressure

Lying - 110/76mmHg

Standing 1 minute 94/70mmHg

Standing 3 minutes 86/66mmHg

Hb	12.0 g/dl
Platelets	321 * 10 ⁹ /l
WBC	5.3 * 10 ⁹ /l

Na ⁺	128 mmol/l
K ⁺	5.6 mmol/l
Urea	5.6 mmol/l
Creatinine	82 µmol/l

Bicarbonate	16mmol/l
Random glucose	4.1 mmol/l
HBA1c	58mmol/mol (7.5%)

Given the most likely diagnosis, what is the most important immediate management?

	IV Hypertonic (3%) saline
	IV 0.45% Saline + 5% Dextrose
	Oral Glucose drink
	IV Bicarbonate (1.24%) Infusion
	100mg IV hydrocortisone

Dashboard

Overall score: 0%

1 -

□ Question 94 of 191



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Dashboard

Overall score: **0%**

1 -

□ Question 95 of 191

□ □

A 55 year-old female presents to the outpatients department having been referred by her GP. She complains of fatigue, increased sweating and weight loss over the past four months. She also reports a loss of sex drive.

Examination reveals that she is pale and has a pulse rate of 121 per minute with a bounding pulse character. Her blood pressure is 118/79 mmHg and she has heart sounds 1 and 2 presents with no added sounds. On auscultation, her chest is clear and her abdomen is soft and non-tender with no organomegaly. She has a smooth goitre but has no signs of thyroid eye disease. Examination of her cranial nerves are normal.

The results of recent blood tests are as follows:

Hb	11.3 g/dl
Platelets	$190 \times 10^9/l$
WBC	$10.9 \times 10^9/l$
Na ⁺	129 mmol/l
K ⁺	4.3 mmol/l
Urea	7.9 mmol/l
Creatinine	94 μ mol/l
ALP	155 u/l
Calcium	2.40 mmol/l
Albumin	40 g/L
TSH	11 mU/L
Free T4	41 pmol/L
Free T3	11 pmol/L

Which of the following is the most likely diagnosis?

	Grave's disease
	Thyroid cancer
	Surreptitious thyroxine ingestion
	De Quervain's thyroiditis
	TSH secreting pituitary tumour

Dashboard

Overall score: **0%**
1 -

□ Question 95 of 191



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1 -

Question 95 of 191

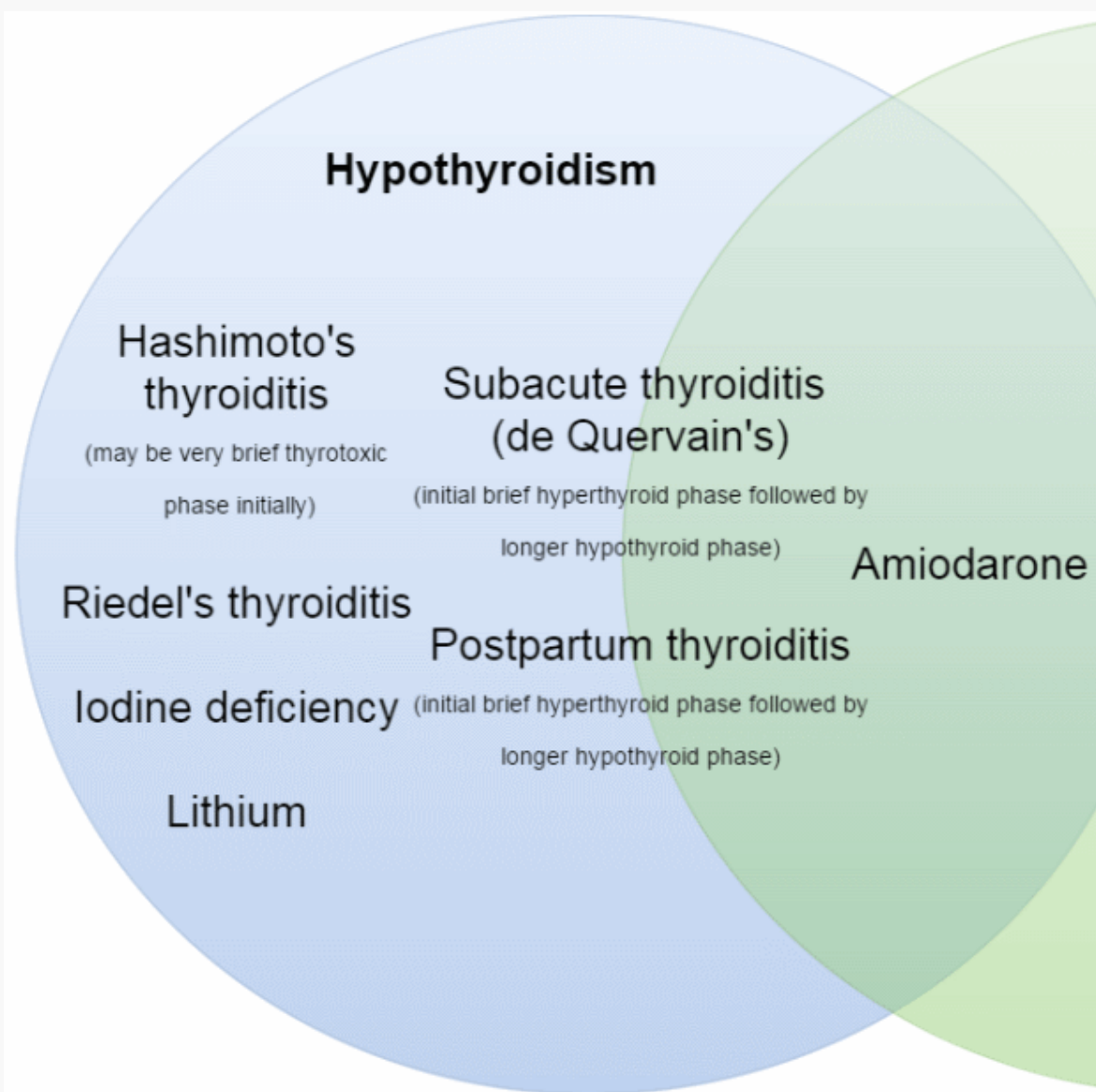
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Examination reveals that she has a heart rate of 100 bpm, blood pressure is 118/79 mmHg and her eyes are clear and her abdomen is soft. She has no goitre and no thyroid eye disease. Examination of her thyroid gland reveals a normal size and consistency.

The results of recent blood tests are as follows:

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Dashboard

Overall score: **0%**
1 -

Question 96 of 191

□ □

A 70-year-old man with a history of smoking 15 cigarettes/day presents with drowsiness, weight loss and a persistent cough. His investigations show:

Na ⁺	115 mmol/l	135-145 mmol/l
K ⁺	5.1 mmol/l	3.5 - 5.0 mmol/l
Urea	3 mmol/l	2.0-7 mmol/l
Creatinine	74 µmol/l	55-120 µmol/l

Plasma osmolality	270 mOsm/kg	285-295 mOsm/kg
Urine osmolality	1210	500 - 800 mOsm/kg

What is the most likely diagnosis?

	Small cell lung cancer
	Hypothyroidism
	Encephalitis
	Congestive cardiac failure
	Squamous cell carcinoma

Dashboard

Overall score: **0%**

1 -

Question 96 of 191

□ □

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	Small cell lung cancer
	Hypothyroidism
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	Congestive cardiac failure
	Squamous cell carcinoma

Dashboard

Overall score: **0%**

1 -

Question 97 of 191

A 53 year old obese HGV driver, normally taking BD novomix 30 insulin presents to your outpatient clinic to clarify some driving regulations he had overheard while eating with colleagues. He is extremely tearful and anxious. He is worried about losing his livelihood as a result of his diabetes.

He was first diagnosed with type 2 diabetes 9 years ago and became insulin dependent 2 years ago. He reports good compliance with insulin every day. However, 18 months ago, he took the same units of insulin after exercising and felt giddy. A spot blood glucose check demonstrated 2.8 mmol/l, which improved immediately after drinking lucozade that he carried with him. No hospitalisation was required. He has no other past medical history. He has no visual field or peripheral nerve impairments. What is the advice you give him regarding driving?

<input type="radio"/>	Can continue driving, review in 1 year
<input type="radio"/>	Can continue driving, no further reviews required
<input type="radio"/>	Must stop driving and give up license permanently.
<input type="radio"/>	Must stop driving temporarily and review in 6 months
<input type="radio"/>	Patient can drive type 1 vehicles (cars, motorcycles) but not type 2 vehicles (lorries, HGV) and should reconsider his profession

Dashboard

Overall score: **0%**

1 -

Question 97 of 191

□ □

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Dashboard

Overall score: **0%**

1 -

□ Question 98 of 191

□ □

A 65-year-old man who is known to have type 2 diabetes mellitus presents for advice. He is a Muslim and is considering fasting for Ramadan. His diabetes is currently controlled with a combination of diet and metformin 500mg tds. Looking at his records the last HbA1c was 6.4% (46 mmol/mol). If he decides to fast during Ramadan, what is the most appropriate advice to give regarding his metformin?

	Metformin should be stopped
	Metformin 1.5g after sunset
	Metformin 500mg before sunrise, 1g after sunset
	Metformin 500mg after sunset
	Metformin 1g before sunrise, 500mg after sunset

Dashboard

Overall score: 0%

1 -

Question 98 of 191

□ □

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Dashboard

Overall score: **0%**

1 -

Question 99 of 191

□ □

You are reviewing in clinic a 67-year-old man who has type 2 diabetes. His glycaemic control is reasonable with metformin therapy; the latest HbA1c is 54 mmol/mol (7.1%). A few weeks ago he was noted to have a clinic blood pressure reading of 152/90 mmHg. A 24 hour blood pressure monitor was requested. The report shows his average blood pressure was 142/88 mmHg. What is the most appropriate course of action?

	Do nothing for now, monitor his blood pressure regularly
	Start an ACE inhibitor
	Start a calcium channel blocker
	Repeat the 24 hour blood pressure monitor in 4-8 weeks time
	Request an ultrasound of his kidneys

Dashboard

Overall score: 0%

1 -

□ Question 99 of 191

□ □

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	Start a calcium channel blocker
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Dashboard

Overall score: **0%**

1 -

Question 100 of 191



A 16 year old male presents with 3 months of chronic headache and visual blurring. He has no past medical history and no known family history. On examination, his heart sounds are normal with no added sounds, respiratory examination is unremarkable. He has no focal neurological signs. Fundoscopy reveals papilloedema, hard exudates and flame haemorrhage. His blood pressure is 226/160mmHg. His blood tests and arterial blood gas are as follows:

Na ⁺	145 mmol/l
K ⁺	2.9 mmol/l
Urea	5.4 mmol/l
Creatinine	72 µmol/l

pH	7.49
PaO ₂	13kPa
PaCO ₂	3.4 kPa
Bicarbonate	34 mmol/L

Serum ambulatory renin activity	0.2 pmol/L @ 3-4 hours (normal range 0.8-3.5 pmol/ml/hr)
Serum ambulatory aldosterone	24 pmol/L@ 3-4 hours (normal range 100-800)

What is the optimal long-term treatment?

	Amlodipine
	Ramipril
	Atenolol
	Doxazosin

	Amiloride
--	-----------

Dashboard

Overall score: **0%**
1 -

Question 100 of 191



A 16 year old male presents with 3 months of chronic headache and visual blurring. He has no past medical history and no known family history. On examination, his heart sounds are normal with no added sounds, respiratory examination is unremarkable. He has no focal neurological signs. Fundoscopy reveals papilloedema, hard exudates and flame haemorrhage. His blood pressure is 226/160mmHg. His blood tests and arterial blood gas are as follows:

Na ⁺	145 mmol/l
K ⁺	2.9 mmol/l
Urea	5.4 mmol/l
Creatinine	72 µmol/l

pH	7.49
PaO ₂	13kPa
PaCO ₂	3.4 kPa
Bicarbonate	34 mmol/L

Serum ambulatory renin activity	0.2 pmol/L @ 3-4 hours (normal range 0.8-3.5 pmol/ml/hr)
Serum ambulatory aldosterone	24 pmol/L@ 3-4 hours (normal range 100-800)

What is the optimal long-term treatment?

	Amlodipine
	Ramipril
	Atenolol
	Doxazosin

Dashboard

Overall score: **0%**
1 -

Question 101 of 191

A 38-year-old man is referred to the pharmacology clinic for review. He is currently managed for hypertension with three anti-hypertensive agents, (ramipril, amlodipine and indapamide). His GP is concerned as he has still not achieved blood pressure target. On examination his blood pressure is 155/95 mmHg, pulse is 78 beats per minute and regular. There are no heart murmurs or bruits. Abdomen is soft and non tender with no masses and his body mass index is 24 kg/m².

Investigations:

Na ⁺	142 mmol/l
K ⁺	3.1 mmol/l
HCO ₃ ⁻	30 mmol/l
Urea	7.0 mmol/l
Creatinine	90 µmol/l

Which of the following is the most likely diagnosis?

<input type="checkbox"/>	Bartter's syndrome
<input type="checkbox"/>	Conn's syndrome
<input type="checkbox"/>	Cushing's syndrome
<input type="checkbox"/>	Licorice overdose
<input type="checkbox"/>	Renal artery stenosis

Dashboard

Overall score: 0%

□ Question 101 of 191

□ □

A 38-year-old man is referred to the pharmacology clinic for review. He is currently managed for hypertension with three anti-hypertensive agents, (ramipril, amlodipine and indapamide). His GP is concerned as he has still not achieved blood pressure target. On examination his blood pressure is 155/95 mmHg, pulse is 78 beats per minute and regular. There are no heart murmurs or bruits. Abdomen is soft and non tender with no masses and his body mass index is 24 kg/m².

Investigations:

Na ⁺	142 mmol/l
K ⁺	3.1 mmol/l
HCO ₃ ⁻	30 mmol/l
Urea	7.0 mmol/l
Creatinine	90 µmol/l

Which of the following is the most likely diagnosis?

	Bartter's syndrome
	Conn's syndrome
	Cushing's syndrome
	Licorice overdose
	Renal artery stenosis

Dashboard

Overall score: **0%**

□ Question 102 of 191



A 24 year old male presented with diabetic ketoacidosis, 12 years after initially diagnosed with type 1 diabetes. He was admitted with the following arterial blood gas:

pH 7.14
Bicarbonate 4 mmol/l

Blood glucose 26 mmol/L
Ketones 9 mmol/L

He was started on an intravenous fixed rate insulin infusion and intravenous fluid rehydration regime in a high dependency setting. At day 3 after the onset of treatment, nursing ask you review the latest blood gas from his arterial line. His fixed rate insulin continues to run. Which of the following blood gases would confirm resolution of his diabetic ketoacidosis?

	pH 7.32, bicarbonate 13, blood glucose 7, ketones 0.3 mmol/L
	pH 7.29, bicarbonate 9, blood glucose 15, ketones 0.9 mmol/L
	pH 7.34, bicarbonate 14, blood glucose 12, ketones 0.9 mmol/L
	pH 7.17, bicarbonate 8, blood glucose 14, ketones 1.2 mmol/L
	pH 7.31, bicarbonate 15, blood glucose 11, ketones 0.5 mmol/L

Dashboard

Overall score: 0%

1 -

□ Question 102 of 191



A 24 year old male presented with diabetic ketoacidosis, 12 years after initially diagnosed with type 1 diabetes. He was admitted with the following arterial blood gas:

pH 7.14
Bicarbonate 4 mmol/l

Blood glucose 26 mmol/L
Ketones 9 mmol/L

He was started on an intravenous fixed rate insulin infusion and intravenous fluid rehydration regime in a high dependency setting. At day 3 after the onset of treatment, nursing ask you review the latest blood gas from his arterial line. His fixed rate insulin continues to run. Which of the following blood gases would confirm resolution of his diabetic ketoacidosis?

	pH 7.32, bicarbonate 13, blood glucose 7, ketones 0.3 mmol/L
	pH 7.29, bicarbonate 9, blood glucose 15, ketones 0.9 mmol/L
	pH 7.34, bicarbonate 14, blood glucose 12, ketones 0.9 mmol/L
	pH 7.17, bicarbonate 8, blood glucose 14, ketones 1.2 mmol/L
	pH 7.31, bicarbonate 15, blood glucose 11, ketones 0.5 mmol/L

Dashboard

Overall score: **0%**

1 -

Question 103 of 191

□ □

A 45-year-old woman comes to the clinic some 6 months after thyroid resection for differentiated thyroid cancer. She is well, has recovered from her surgery and has a neatly healed scar across her anterior neck. Blood pressure is normal at 110/80 mmHg, and her pulse is 60 and regular. Her body mass index is unchanged at 25 kg/m². Only medication is thyroid hormone replacement.

Which of the following is the most appropriate way to monitor for a recurrence?

	MRI neck
	Technetium scanning
	Thyroglobulin
	Thyroid ultrasound scan
	T3 levels

Dashboard

Overall score: 0%

1 -

Question 103 of 191

□ □

A 45-year-old woman comes to the clinic some 6 months after thyroid resection for differentiated thyroid cancer. She is well, has recovered from her surgery and has a neatly healed scar across her anterior neck. Blood pressure is normal at 110/80 mmHg, and her pulse is 60 and regular. Her body mass index is unchanged at 25 kg/m². Only medication is thyroid hormone replacement.

Which of the following is the most appropriate way to monitor for a recurrence?

	MRI neck
	Technetium scanning
	Thyroglobulin
	Thyroid ultrasound scan
	T3 levels

Dashboard

Overall score: **0%**

1 -

□ Question 104 of 191



A 28 year old pregnant lady presents to the Emergency Department with palpitations and sweating. She mentions that she has had these symptoms on and off for the past 4 months but that they have worsened over the past few weeks. Now she is feeling worried and wanted to be assessed medically due to her concern she was having a miscarriage. She looks particularly anxious to be in hospital. This is her first pregnancy. She is 7 weeks pregnant. She has had no vaginal bleeding or discharge during the course of her pregnancy. She is normally fit and well.

Initial observations reveal a blood pressure of 130/85 mmHg, a heart rate of 110 beats per minute, a respiratory rate of 19/min, oxygen saturations of 99% on air and a temperature of 37.5 degrees. Examination findings reveal a resting tachycardia and a subtle goitre is noted.

Blood test results are as follows:

Hb	110 g/l
Wcc	12 x10 ⁹ /l
Plt	245 x10 ⁹ /l
CRP	12 mg/l
Na ⁺	140 mmol/l
K ⁺	5.0 mmol/l
Ur	5.7 mmol/l
Cr	110 µmol/l
D-dimer	490 ng/ml
T4	21 mU/l
TSH	<0.05 pmol/l

Given the most likely diagnosis, how should this lady be managed?

--	--

	Watch and wait/symptomatic control with beta blockade
	Radioactive iodine therapy
	Subtotal thyroidectomy
	Propylthiouracil
	Block and replace carbimazole + thyroxine

Dashboard

Overall score: **0%**

1 -

□ Question 104 of 191



A 28 year old pregnant lady presents to the Emergency Department with palpitations and sweating. She mentions that she has had these symptoms on and off for the past 4 months but that they have worsened over the past few weeks. Now she is feeling worried and wanted to be assessed medically due to her concern she was having a miscarriage. She looks particularly anxious to be in hospital. This is her first pregnancy. She is 7 weeks pregnant. She has had no vaginal bleeding or discharge during the course of her pregnancy. She is normally fit and well.

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	Watch and wait/symptomatic control with beta blockade
	Radioactive iodine therapy
	Subtotal thyroidectomy
	Propylthiouracil
	Block and replace carbimazole + thyroxine

Dashboard

Overall score: **0%**

1 -

Question 105 of 191

□ □

A 51-year-old lady librarian attends outpatient clinic with painful eyes. She reports that her vision has deteriorated over the past four weeks. On examination, she has proptosis, periorbital oedema and a painful complex ophthalmoplegia. She appears anxious and is worried about not coping at work. At present she smokes ten cigarettes daily.

What would be the most appropriate next step in managing this patient?

	IV methylprednisolone
	Surgical decompression
	Smoking cessation advice
	Total thyroidectomy
	Artificial tear drops

Dashboard

Overall score: 0%

1 -

Question 105 of 191

□ □

A 51-year-old lady librarian attends outpatient clinic with painful eyes. She reports that her vision has deteriorated over the past four weeks. On examination, she has proptosis, periorbital oedema and a painful complex ophthalmoplegia. She appears anxious and is worried about not coping at work. At present she smokes ten cigarettes daily.

What would be the most appropriate next step in managing this patient?

	IV methylprednisolone
	Surgical decompression
	Smoking cessation advice
	Total thyroidectomy
	Artificial tear drops

Dashboard

Overall score: **0%**

1 -

□ Question 106 of 191



A 56-year-old patient presents to hospital with confusion. He is a long-term smoker. He has a past-medical history of chronic obstructive pulmonary disease, hypertension, bipolar disease and long-term muscular back pain.

On examination he is confused with a Glasgow Coma Scale score of 14 out of 15. He has a pulse rate of 97 beats per minute with a blood pressure of 145/97 mmHg. Respiratory rate is 14 per minute with oxygen saturations of 95% on room air. He has bilateral vesicular breath sounds on auscultation with normal percussion. His abdomen is soft and non-tender with no masses. He has no focal neurology.

Investigations

Hb	102 g/dL
WCC	$8.2 \times 10^9/l$
Platelets	$133 \times 10^9/l$

Na+	146 mmol/L
K+	5.4 mmol/L
Cr	132 μ mol/L
Ur	10.1 mmol/L

Albumin	26 g/L
Adjusted Calcium	3.78 mmol/L
Alkaline Phosphatase	76 IU/L
PTH	Undetectable
Serum ACE	45U/L (10-50)
Serum Electrophoresis	IgG 18 g/L (5-13 g/L) - Polyclonal

Urinary Electrophoresis	Undetectable
-------------------------	--------------

Chest X-ray	Right parahilar opacification 3x4cm
Lumbar Spine X-ray	Normal

What is the likely underlying diagnosis?

<input type="checkbox"/>	Squamous Cell Carcinoma
<input type="checkbox"/>	Multiple Myeloma
<input type="checkbox"/>	Sarcoidosis
<input type="checkbox"/>	Drug induced hypercalcaemia
<input type="checkbox"/>	Prostate carcinoma

Dashboard
<p>Overall score: 0%</p> <p>1 -</p>

□ Question 106 of 191



A 56-year-old patient presents to hospital with confusion. He is a long-term smoker. He has a past-medical history of chronic obstructive pulmonary disease, hypertension, bipolar disease and long-term muscular back pain.

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Investigations

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Urinary Electrophoresis	Undetectable
-------------------------	--------------

Chest X-ray	Right parahilar opacification 3x4cm
Lumbar Spine X-ray	Normal

What is the likely underlying diagnosis?

	Squamous Cell Carcinoma
	Multiple Myeloma
	Sarcoidosis
	Drug induced hypercalcaemia
	Prostate carcinoma

Dashboard
Overall score: 0% 1 -

□ Question 107 of 191

□ □

A 47-year-old woman is admitted to the surgical ward with severe loin to groin abdominal pain. A CT-KUB reveals a right-sided renal calculus. When you clerk her in she admits to you that she has not felt herself for the past few weeks with polyuria, polydipsia, constipation and altered mood.

Blood tests show:

Estimated glomerular filtration rate	>60 ml/min
Adjusted calcium	3.1 mmol/l (2.1-2.6 mmol/l)
Phosphate	0.6 mmol/l (0.8-1.4 mol/l)
Parathyroid hormone	5.1 pmol/l (1.2-5.8 pmol/l)

Which of the following is the most likely cause for her symptoms?

	Primary hyperparathyroidism
	Secondary hyperparathyroidism
	Sarcoidosis
	Tertiary hyperparathyroidism
	Type 1 renal tubular acidosis

Dashboard

Overall score: 0%

1 -

Question 107 of 191

□ □

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	Primary hyperparathyroidism
	Secondary hyperparathyroidism
	Sarcoidosis
	Tertiary hyperparathyroidism
	Type 1 renal tubular acidosis

Dashboard

Overall score: **0%**

1 -

Question 108 of 191

□ □

A 42-year-old man is referred from his GP to the outpatient department with a loss of libido and impotence. He has a stressful job as a pharmaceutical representative and has a five-year pack year history. He consumes four pints of beer per night.

Blood tests reveal a prolactin of 3340 mU/l (<360), normal thyroid function tests, MCV 100 fl, testosterone low.

Which of the following would be the most appropriate investigation?

	Visual field testing
	Urine cortisol
	Pituitary dynamic function tests
	MRI pituitary
	Anterior pituitary function testing

Dashboard

Overall score: 0%

1 -

Question 108 of 191

□ □

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Which of the following would be the most appropriate investigation?

	Visual field testing
	Urine cortisol
	Pituitary dynamic function tests
	MRI pituitary
	Anterior pituitary function testing

Dashboard

Overall score: **0%**

1 -

Question 109 of 191

□ □

A 19 year old gentleman with a background history of asthma presents to the Emergency Department complaining of leg weakness and the inability to walk. He had run a marathon the day before. On examination there is 3/5 weakness of the leg extensors bilaterally. Tone, reflexes and coordination are unimpaired and plantars are downgoing bilaterally. Straight leg raise and sensation to light touch and pain stimulus are unimpaired.

Blood tests show the following:

Hb	13.4g/dl
WBC	$6.2 \times 10^9/l$
Na ⁺	136mmol/l
K ⁺	2.9mmol/l
Urea	6.8mmol/l
Creatinine	104μmol/l

What is the most appropriate treatment in this case?

	Oral potassium and encourage bed rest
	Hourly forced vital capacity measurements and plasma exchange
	Oral potassium and encourage gentle exercise
	Hourly forced vital capacity measurements and IV immunoglobulin
	Plasma exchange and oral potassium supplementation

□ Question 109 of 191

□ □

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Creatinine	104 μ mol/l

What is the most appropriate treatment in this case?

	Oral potassium and encourage bed rest
	Hourly forced vital capacity measurements and plasma exchange
	Oral potassium and encourage gentle exercise
	Hourly forced vital capacity measurements and IV immunoglobulin
	Plasma exchange and oral potassium supplementation

Question 110 of 191



A 24-year-old lady presents to hospital with increasing confusion. Her parents describe a gradual history of weight loss, lethargy with abdominal cramping. She has no past medical history and is prescribed no regular medications. She lives with her parents. Her mother suffers from hypothyroidism and her father from hypertension which is controlled with bendroflumethiazide.

On examination she is thin, with cool skin and sunken eyes. Her capillary refill time is 3 seconds with dry mucous membranes. Auscultation of her chest reveals bilateral symmetrical vesicular breath sounds. Her abdomen is soft with normal bowel sounds. She is confused with a Glasgow Coma Scale of 14. She has no focal neurology.

Her investigations reveal;

Hb	10.4 g/dL
MCV	90 fL
WCC	$6.4 \times 10^9/l$
Platelets	$170 \times 10^9/l$

Na+	105 mmol/L
K+	5.8 mmol/L
Ur	8.8 mmol/L
Cr	90 μ mol/L
Glucose	3.9 mmol/L

Urinary Osmolality	108 mmol/L
Urinary Sodium	67 mmol/L

Chest X ray	Clear
CT Head	No intracranial abnormalities

What is the most likely diagnosis?

	Adrenal insufficiency
	Laxative abuse
	Hypothyroidism
	Diuretic use
	SIADH

Dashboard

Overall score: 0%

1 -

Question 110 of 191



A 24-year-old lady presents to hospital with increasing confusion. Her parents describe a gradual history of weight loss, lethargy with abdominal cramping. She has no past medical history and is prescribed no regular medications. She lives with her parents. Her mother suffers from hypothyroidism and her father from hypertension which is controlled with bendroflumethiazide.

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Her investigations reveal;

Hb	10.4 g/dL
MCV	90 fL
WCC	$6.4 \times 10^9/l$
Platelets	$170 \times 10^9/l$

Na+	105 mmol/L
K+	5.8 mmol/L
Ur	8.8 mmol/L
Cr	90 μ mol/L
Glucose	3.9 mmol/L

Urinary Osmolality	108 mmol/L
Urinary Sodium	67 mmol/L

Chest X ray	Clear
CT Head	No intracranial abnormalities

What is the most likely diagnosis?

	Adrenal insufficiency
	Laxative abuse
	Hypothyroidism
	Diuretic use
	SIADH

Dashboard

Overall score: **0%**
1 -

□ Question 111 of 191

□ □

A 40-year-old man is referred for difficult to control hypertension. This was diagnosed three years ago and has not responded to a combination of ramipril, indapamide and amlodipine. On examination his blood pressure today is 168/110 mmHg despite his regular medication. His most recent blood tests show the following:

Na ⁺	140 mmol/l
K ⁺	2.9 mmol/l
Urea	5.5 mmol/l
Creatinine	86 µmol/l

A CT abdomen is requested:



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What is the most likely diagnosis?

	Adrenal adenoma
	Pheochromocytoma
	Adrenal hyperplasia
	Coarctation of the aorta
	Renal artery stenosis

Dashboard

Overall score: 0%

1 -

□ Question 111 of 191

□ □

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Urea	5.5 mmol/l
Creatinine	86 µmol/l

A CT abdomen is requested:



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What is the most likely diagnosis?

	Adrenal adenoma
	Pheochromocytoma
	Adrenal hyperplasia
	Coarctation of the aorta
	Renal artery stenosis

Dashboard

Overall score: **0%**

1 -

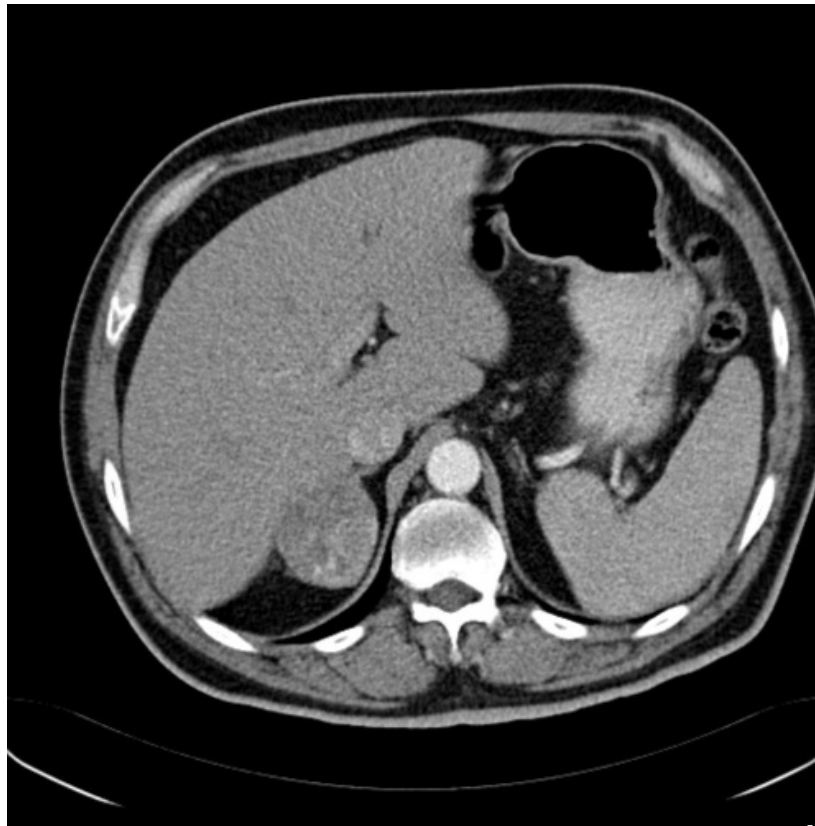
□ Question 111 of 191

□ □

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© Image used on license from Radiopaedia

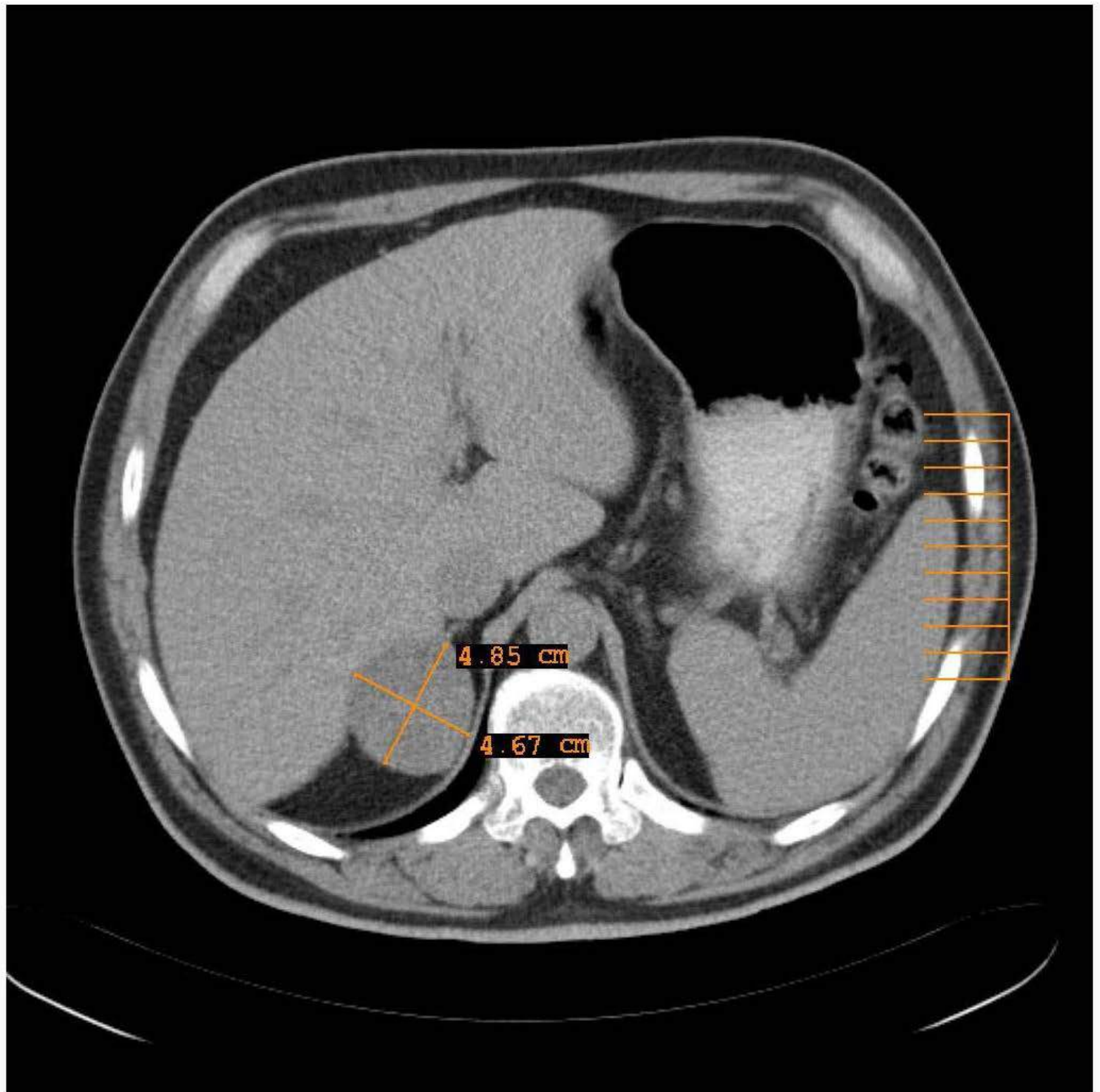
What is the most likely diagnosis?

	Adrenal adenoma
	Pheochromocytoma
	Adrenal hyperplasia
	Coarctation of the aorta
	Renal artery stenosis

Dashboard

Overall score: 0%

1 -



Question 1 of 79

A 58 year-old man with type 2 diabetes mellitus presents to his GP for his annual review. His diabetes is currently being treated with metformin 500mg twice daily and gliclazide 40mg once daily. He complains that recently he has had several episodes of hypoglycaemia and this has been affecting him at work where his job is as a construction worker. His most recent HbA1c was 66 mmol/mol. Apart from the diabetes, he also has a past medical history of stage 2 heart failure, hypertension and mild chronic obstructive pulmonary disease.

What is the most appropriate treatment change?

<input type="checkbox"/>	Stop gliclazide and start exenatide
<input type="checkbox"/>	Stop gliclazide and start sitagliptin
<input type="checkbox"/>	Commence daily insulin
<input type="checkbox"/>	Stop gliclazide and start glibenclamide
<input type="checkbox"/>	Stop gliclazide and start pioglitazone

Dashboard

Overall score: **0%**

1 -

Question 1 of 79

□ □

A 58 year-old man with type 2 diabetes mellitus presents to his GP for his annual review. His diabetes is currently being treated with metformin 500mg twice daily and gliclazide 40mg once daily. He complains that recently he has had several episodes of hypoglycaemia and this has been affecting him at work where his job is as a construction worker. His most recent HbA1c was 66 mmol/mol. Apart from the diabetes, he also has a past medical history of stage 2 heart failure, hypertension and mild chronic obstructive pulmonary disease.

What is the most appropriate treatment change?

	Stop gliclazide and start exenatide
	Stop gliclazide and start sitagliptin
	Commence daily insulin
	Stop gliclazide and start glibenclamide
	Stop gliclazide and start pioglitazone

Dashboard

Overall score: **0%**

1 -

Question 1 of 79

□ □

A 58 year-old man with type 2 diabetes mellitus presents to his GP for his annual review. His diabetes is currently being treated with metformin 500mg twice daily and gliclazide 40mg once daily. He complains that recently he has had several episodes of hypoglycaemia and this has been affecting him at work where his job is as a construction worker. His most recent HbA1c was 66 mmol/mol. Apart from the diabetes, he also has a past medical history of stage 2 heart failure, hypertension and mild chronic obstructive pulmonary disease.

What is the most appropriate treatment change?

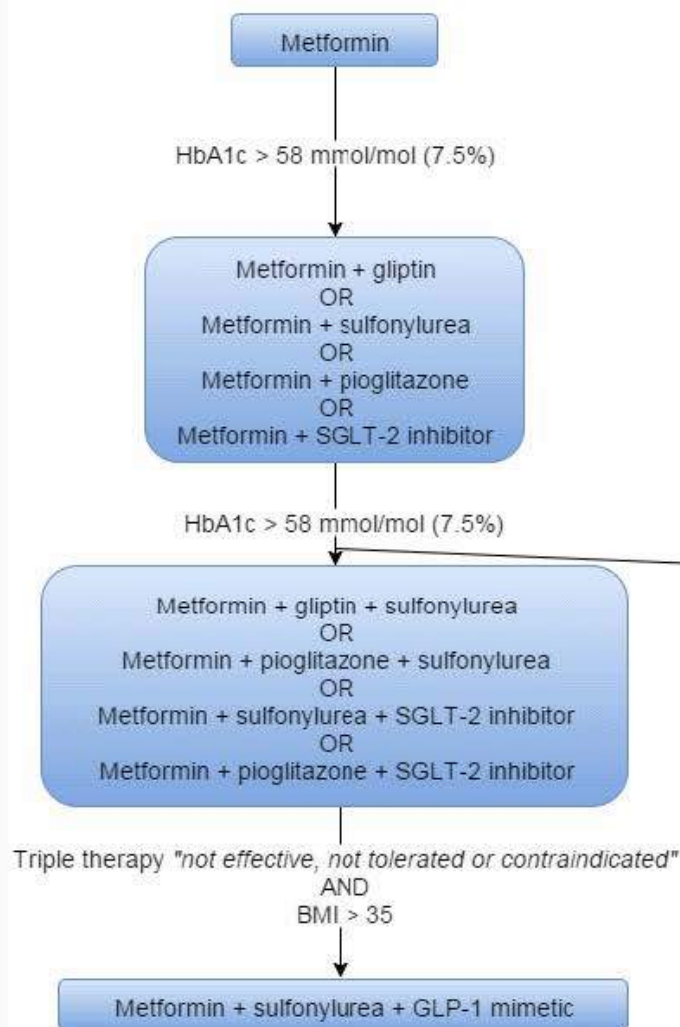
	Stop gliclazide and start exenatide
	Stop gliclazide and start sitagliptin
	Commence daily insulin
	Stop gliclazide and start glibenclamide
	Stop gliclazide and start pioglitazone

Dashboard

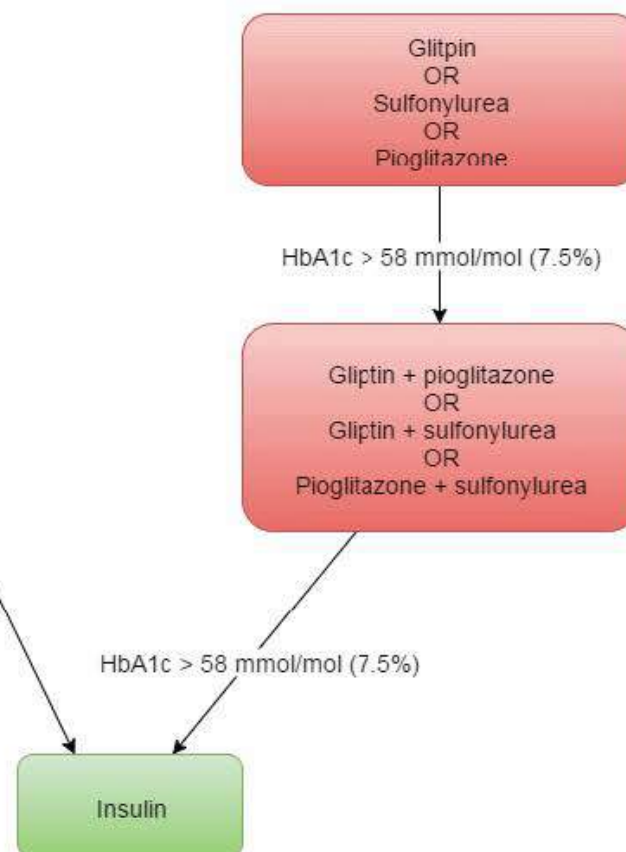
Overall score: **0%**

1 -

Metformin



Metformin not tolerated or CI



Question 1 of 79

A 58 year-old man with type 2 diabetes treated with metformin 500mg twice daily has had several episodes of hypoglycaemia. His recent HbA1c was 66 mmol/mol, he has hypertension and mild chronic kidney disease (eGFR 45 ml/min/1.73m²).

What is the most appropriate management?

<input type="radio"/>	Stop gliclazide and start pioglitazone
<input type="radio"/>	Stop gliclazide and start glimepiride
<input type="radio"/>	Commence daily insulin
<input type="radio"/>	Stop gliclazide and start glibenclamide
<input type="radio"/>	Stop gliclazide and start pioglitazone

Primary prevention

(10-year cardiovascular risk $\geq 10\%$ OR
most type 1 diabetics OR
CKD if eGFR $< 60\text{ml/min/m}^2$)

Atorvastatin 20mg od

(if non-HDL has not fallen by $\geq 40\%$ then
consider titrating up to 80mg)

Dashboard

Overall score: **0%**

1 -

□ Question 2 of 79



A 40 year old man presents to the Emergency Department with tiredness and dizziness (worse on standing) which has been ongoing for the past few months. He had a past medical history of epilepsy and mentions that he has had 'brain surgery' in the past. He is on some medications but cannot remember the names. He has no allergies.

On assessment, he has no focal neurological deficit and cardiovascular/respiratory examination is normal. Observations show a blood pressure of 135/90 mmHg (dropping to 105/82 mmHg on standing), a heart rate of 67 beats per minute, a temperature of 36.2 degrees, oxygen saturations of 94% on air and a respiratory rate of 18/min. Given his medical history, you opt to keep this gentleman in the short stay unit for observation overnight.

Baseline blood tests are as follows:

Hb	125 g/l
WCC	9.2 x10 ⁹ /l
Plt	290 x10 ⁹ /l
CRP	10 mg/l
Gluc	3.9 mmol/l
Na+	138 mmol/l
K+	5.8 mmol/l
Ur	7.2 mmol/l
Cr	100 µmol/l
TSH	0.4 mU/l
T4	5.0 pmol/l

Given the above, what is the most likely underlying diagnosis?

Hypopituitarism

	Hypothyroidism
	Acromegaly
	Pheochromocytoma
	Medication side effects

Dashboard

Overall score: 0%

1 -

□ Question 2 of 79



A 40 year old man presents to the Emergency Department with tiredness and dizziness (worse on standing) which has been ongoing for the past few months. He had a past medical history of epilepsy and mentions that he has had 'brain surgery' in the past. He is on some medications but cannot remember the names. He has no allergies.

On assessment, he has no focal neurological deficit and cardiovascular/respiratory examination is normal. Observations show a blood pressure of 135/90 mmHg (dropping to 105/82 mmHg on standing), a heart rate of 67 beats per minute, a temperature of 36.2 degrees, oxygen saturations of 94% on air and a respiratory rate of 18/min. Given his medical history, you opt to keep this gentleman in the short stay unit for observation overnight.

Baseline blood tests are as follows:

Hb	125 g/l
WCC	9.2 x10 ⁹ /l
Plt	290 x10 ⁹ /l
CRP	10 mg/l
Gluc	3.9 mmol/l
Na+	138 mmol/l
K+	5.8 mmol/l
Ur	7.2 mmol/l
Cr	100 µmol/l
TSH	0.4 mU/l
T4	5.0 pmol/l

Given the above, what is the most likely underlying diagnosis?

Hypopituitarism

	Hypothyroidism
	Acromegaly
	Pheochromocytoma
	Medication side effects

Dashboard

Overall score: **0%**
1 -

□ Question 3 of 79



A 34-year-old woman with a body mass index of 28kg/m² and a background of bipolar disorder presents with excessive thirst, polyuria, and nocturia. Her current medications include lithium and occasional over the counter paracetamol. Her investigation results are as shown below.

Hb	120 g/l
Platelets	220 * 10 ⁹ /l
WBC	5.2 * 10 ⁹ /l

Na ⁺	128 mmol/l
Ca ⁺	2.32 mmol/l
Urea	3 mmol/l

Fasting plasma glucose 7.2 mmol/L

Water deprivation test:

Initial plasma osmolality low

Urine osmolality 300-400 mOsm/kg

Urine osmolality post desmopressin 400 mOsm/kg

Final plasma ADH moderate

What is the most likely cause of her symptoms?

	Type 2 diabetes mellitus
	Nephrogenic diabetes insipidus
	Type 1 diabetes mellitus
	Primary polydipsia

Dashboard

Overall score: **0%**

1 -

Question 3 of 79



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<input type="checkbox"/>	Type 1 diabetes mellitus
<input checked="" type="checkbox"/>	Primary polydipsia

Dashboard

Overall score: **0%**

1 -

□ Question 4 of 79



You are the endocrinology registrar in the diabetic clinic. You see a 45 year old female with type 2 diabetes mellitus. She is generally well in herself. She currently takes metformin 500 mg bd and has no other regular medications. She has good hypoglycaemia awareness and rarely gets hypoglycaemic episodes. Blood sugars on home monitoring range between 5 and 9.

Routine blood tests show:

Hb	131 g/l
Plt	$131 \times 10^9/l$
WCC	$13.1 \times 10^9/l$
Na+	131 mmol/l
K+	3.1 mmol/l
Urea	3.1 mmol/l
Creatinine	31 $\mu\text{mol/l}$
eGFR	79 ml/kg/1.73m ²
HbA1c	46 mmol/mol (6.4%)

Urinalysis: PRO+, GLUC +, nil else.

Urinary ACR (albumin:creatinine ratio) is 3.6 mg/mmol.

On examination, her BMI is 21 kg/m², she has good peripheral sensation, fundi look normal. Chest is clear to auscultation, heart sounds are normal with no murmurs and her abdomen is soft and non tender.

Her heart rate is 72 beats per minute and regular, blood pressure is 124/75 mmHg, respiratory rate is 20/min, oxygen saturations are 98% on air and temperature 36.8 degrees.

What medication should be commenced in this lady for her ongoing management?

	Commence gliclazide 80mg BD
	Commence ramipril 1.25mg OD
	Increase metformin to 500 mg TDS
	Commence candesartan 2 mg OD
	Commence antibiotics for suspected UTI

Dashboard

Overall score: **0%**

1 -

□ Question 4 of 79



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	Commence candesartan 2 mg OD
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Dashboard

Overall score: **0%**

1 -

□ Question 5 of 79



A 71-year-old gentleman presents to clinic for review. He has recently been diagnosed with type two diabetes following screening by his GP. His HbA1c has not responded to dietary changes that he was advised on. He has a past medical history of bladder cancer for which he had chemotherapy, hypertension, macular degeneration, eczema and chronic kidney disease. His baseline eGFR is 28ml/min/1.73m².

Blood tests:

Na ⁺	139 mmol/l
K ⁺	4.4 mmol/l
Urea	6.2 mmol/l
Creatinine	214 µmol/l

What is the most appropriate medication to start?

	Metformin
	Sulfonylurea
	Pioglitazone
	Insulin
	GLP-1 mimetic

Dashboard

Overall score: 0%

1 -

Question 5 of 79

□ □

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	Insulin
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Dashboard

Overall score: **0%**

1 -

□ Question 5 of 79

□ □

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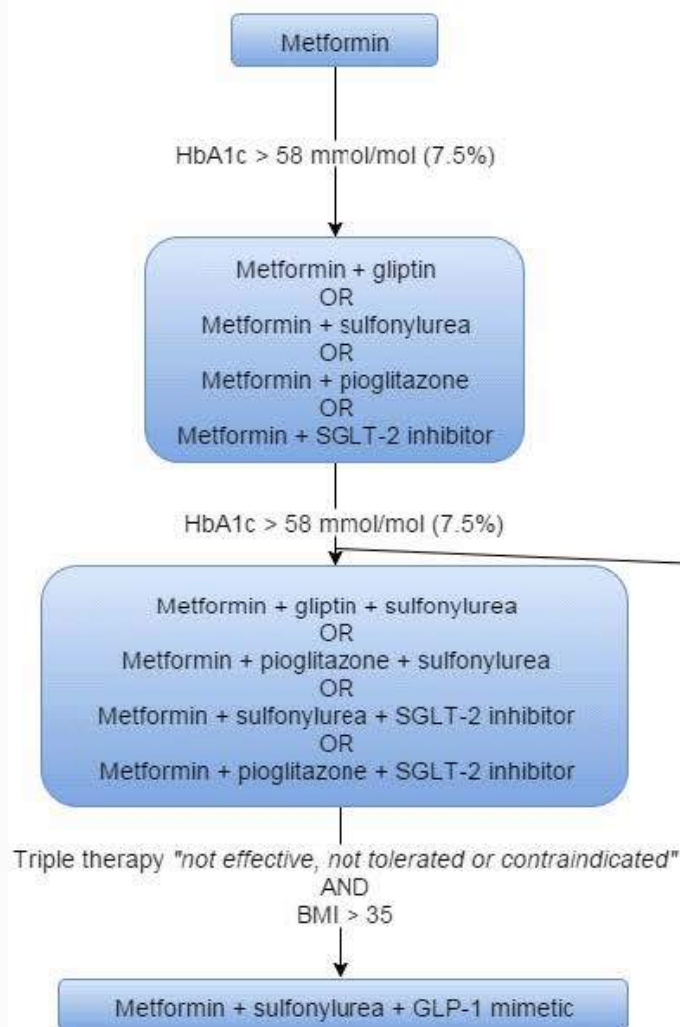
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	Metformin
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	Pioglitazone
	Insulin
	GLP-1 mimetic

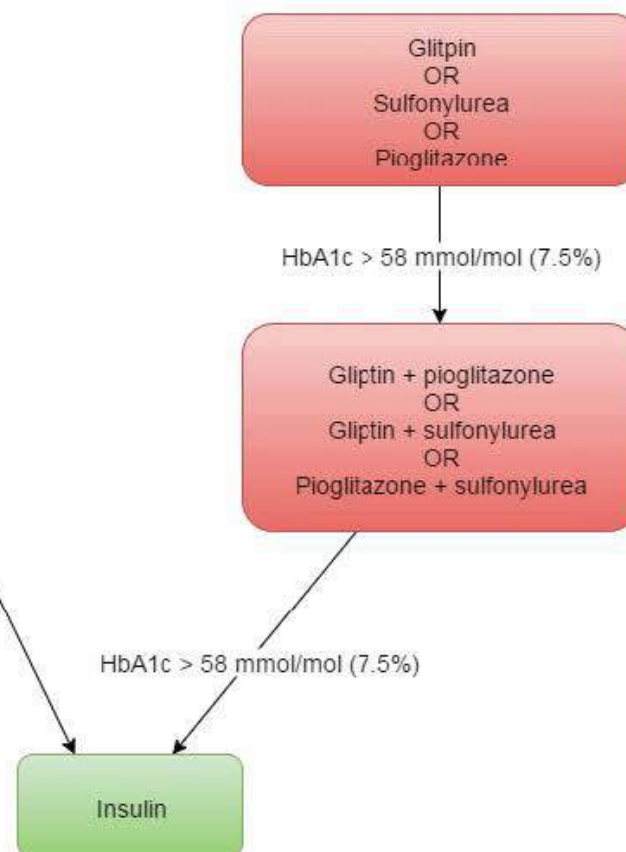
Dashboard

Overall score: **0%**

Metformin



Metformin not tolerated or CI



Question 5 of 79

A 71-year-old gentleman presents for cardiovascular risk screening by his GP. His HbA_{1c} is 5.8%. He has a history of bladder cancer for which he was treated with radical prostatectomy and has no kidney disease. His baseline

Blood tests:

Na ⁺	139 mmol/l
K ⁺	4.4 mmol/l
Urea	6.2 mmol/l
Creatinine	214 µmol/l

Primary prevention

(10-year cardiovascular risk $\geq 10\%$ OR
most type 1 diabetics OR
CKD if eGFR $< 60\text{ml/min/m}^2$)



Atorvastatin 20mg od

(if non-HDL has not fallen by $\geq 40\%$ then
consider titrating up to 80mg)

What is the most appropriate medication to start?

	Metformin
	Sulfonylurea
	Pioglitazone
	Insulin
	GLP-1 mimetic

Dashboard

Overall score: 0%

1 -

□ Question 6 of 79



A 62-year-old man presents to hospital with a three day history of tiredness, muscle aches, a fever and pain at the front of his neck. Two weeks ago he had an upper respiratory tract infection which he treated himself with paracetamol and oral decongestants. He did not receive any antibiotics. His only past medical history is mild arthritis of the right knee and he only takes occasional antihistamines during summer time.

On examination, he appears anxious with a fine resting tremor. He has a temperature 38.1°C, a pulse rate of 125 per minute which is regular and normal in character and a blood pressure of 131/78 mmHg. Heart sounds 1 and 2 were present with no added sounds and his chest was clear on auscultation. His abdomen was soft and non-tender with no organomegaly. Neurological examination was unremarkable apart from the resting tremor. Neck examination reveals a diffusely enlarged and tender thyroid gland.

Blood tests are requested and the results are as follows:

Hb	14.0 g/dl	
Platelets	378 * 10 ⁹ /l	
WBC	8.9 * 10 ⁹ /l	
ESR (Westergren)	94 mm/1st hour	Normal range 0-30
Free T4	214 nmol/l	
Free T3	192 nmol/L	
Plasma TSH	<0.05 mU/l	

Which of the following investigations is likely to be most helpful in establishing the diagnosis?

	Blood cultures
	Serum anti-thyroid antibodies
	Ultrasound scan of neck

	Radioactive iodine uptake scan
	Fine needle aspiration

Dashboard

Overall score: **0%**
1 -

□ Question 6 of 79



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Dashboard

Overall score: **0%**
1 -

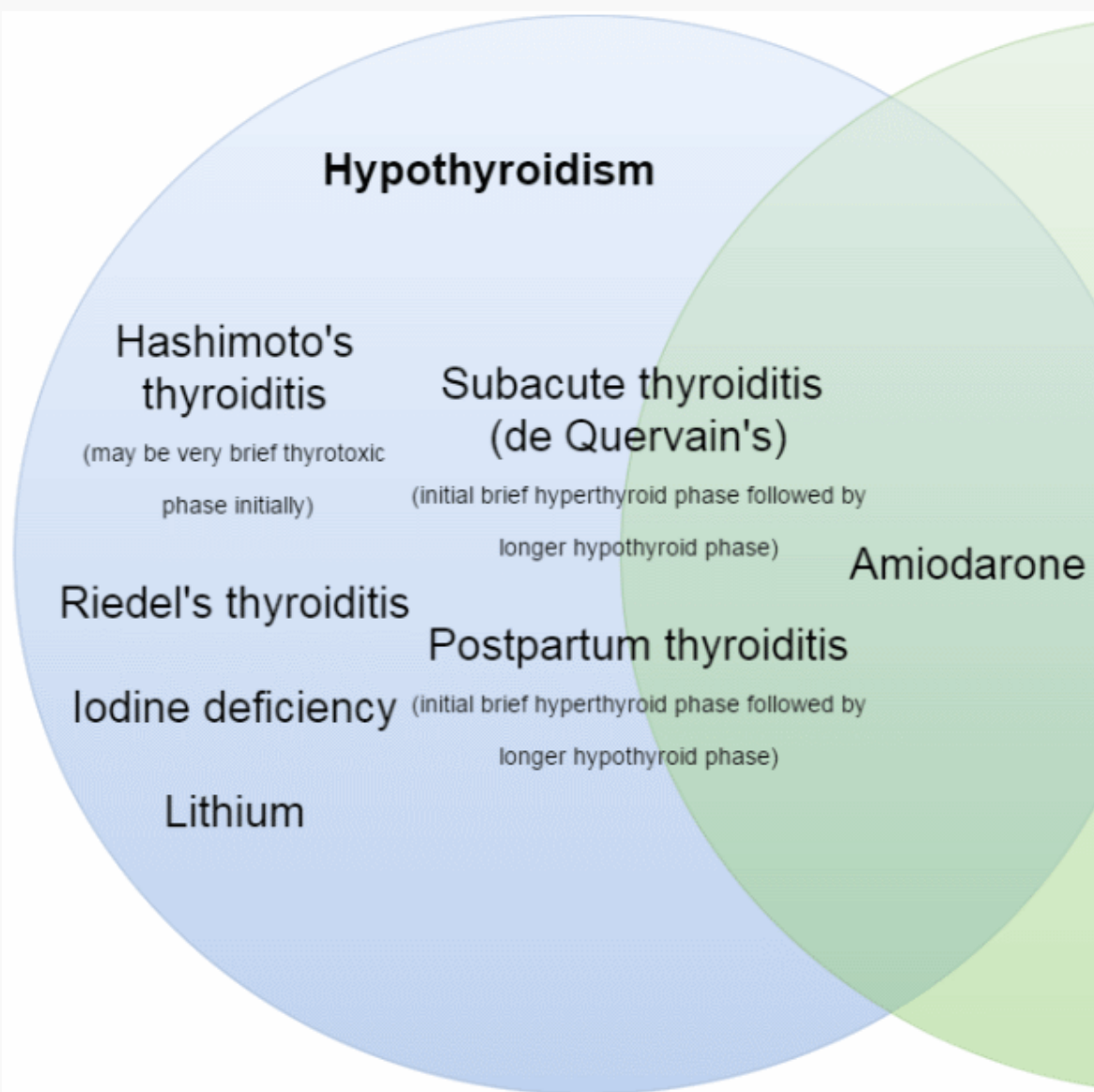
Question 6 of 79

A 62-year-old man presents with a swelling of his neck. Two weeks ago he took oral decongestants. He did not smoke and he only takes occasional alcohol.

On examination, he appears well. The swelling is minute which is regular and symmetrically present with no added sound or organomegaly. Neurological examination is normal. Diffusely enlarged and tender thyroid gland.

Blood tests are requested and the results are as follows:

Hb	14.0 g/dL	
Platelets	$378 \times 10^9/L$	
WBC	$8.9 \times 10^9/L$	
ESR (Westergren)	94 mm/1st hour	Normal range 0-30
Free T4	214 nmol/L	
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Blood cultures
Serum anti-thyroid antibodies
Ultrasound scan of neck

	Radioactive iodine uptake scan
	Fine needle aspiration

Dashboard

Overall score: **0%**
1 -

□ Question 7 of 79



A 24-year-old female presents to the emergency department with severe abdominal pain which had developed over for the last few hours. The pain was central, severe and stabbing in nature associated with vomiting. She was in hysterics and was extremely agitated and confused. Past medical history included asthma and depression. Two days earlier she had seen her GP for dysuria and been prescribed trimethoprim.

She was a student studying chemistry at university and had recently been out late several nights drinking excess alcohol to celebrate passing her exams. On examination, she was unwell, extremely clammy, distressed with generalised abdominal tenderness and weakness in both legs with areflexia. Heart sounds and chest were clear. Observations showed a blood pressure 190/100 mmHg, heart rate 126/min, regular and temperature 37.9°C.

Which investigation is most likely to be diagnostic?

	Urinary catecholamines
	Abdominal ultrasound
	Urinary porphobilinogen
	Lumbar puncture
	Blood cultures

Dashboard

Overall score: 0%

1 -

Question 7 of 79



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1 -

□ Question 7 of 79

□ □

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	Urinary catecholamines
	Abdominal ultrasound
	Urinary porphobilinogen
	Lumbar puncture
	Blood cultures

Dashboard

Overall score: 0%

1 -

Mitochondria

Cytosol

Glycine + succinyl-CoA

Sideroblastic anemia

ALA synthase

δ -aminolevulinic acid

Lead poisoning

ALA dehydratase

Porphobilinogen

Porphobilinogen deaminase

AIP

Hydroxymethylbilane

Uroporphyrinogen III

Uroporphyrinogen decarboxylase

PCT

Coproporphyrinogen III

Protoporphyrin

Fe^{2+}

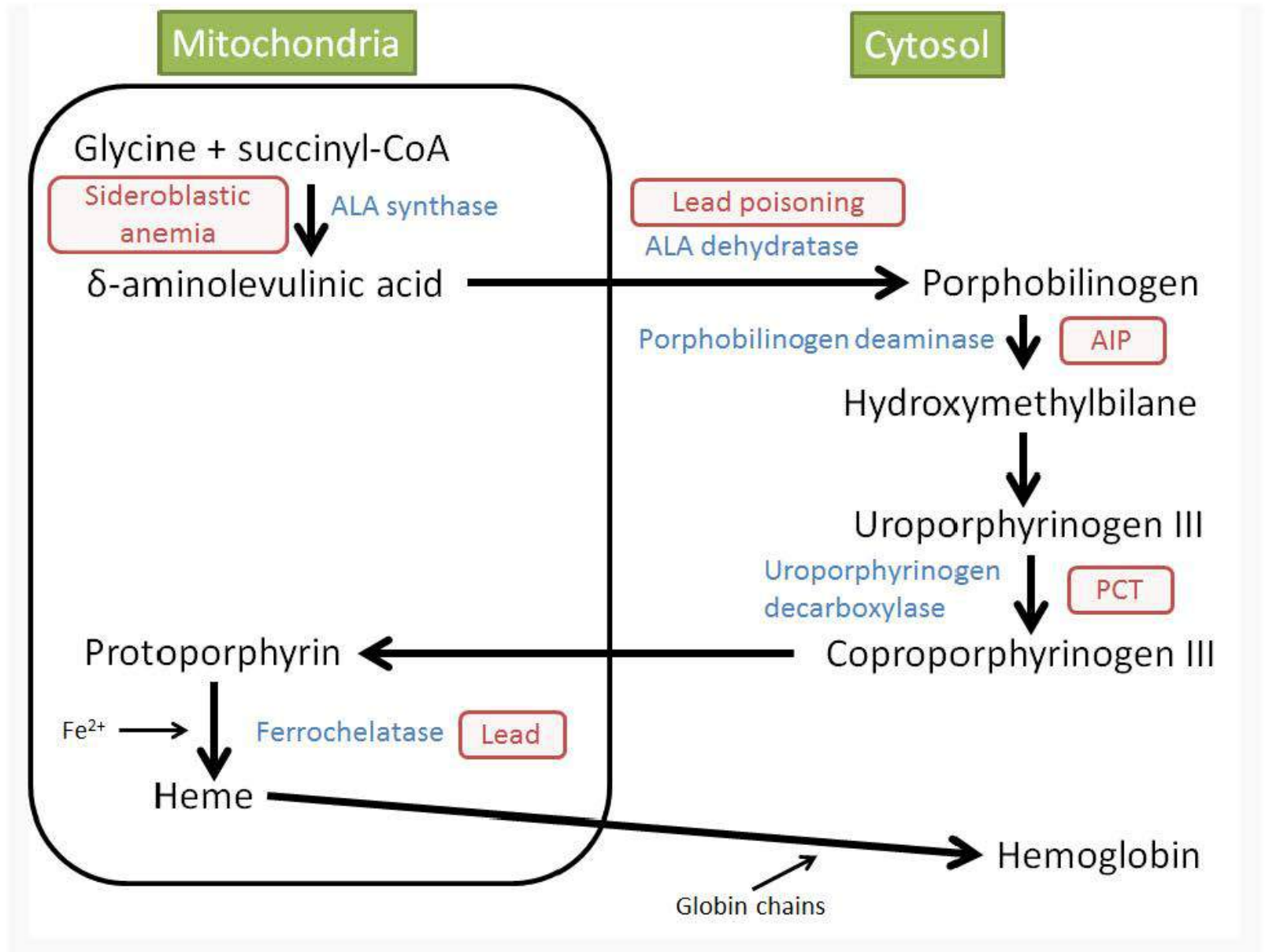
Ferrochelatase

Lead

Heme

Hemoglobin

Globin chains



□ Question 8 of 79



An 85-year-old woman is brought into A+E with hypothermia, sinus bradycardia and unresponsive. A CT head reveals no acute intra-cranial pathology. Passive warming and intravenous fluids are commenced. Subsequent blood tests reveal the panel below. A collateral history from family members reveals symptoms of lethargy, cold intolerance and weight gain over the last few months.

TSH	>30.0 mU/L
T3	<0.05 mU/L

What is the most appropriate initial treatment?

	Levothyroxine and Liothyronine
	Levothyroxine
	Lugol's iodine
	Liothyronine
	Carbimazole

Dashboard

Overall score: 0%

1 -

□ Question 8 of 79



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Dashboard

Overall score: **0%**

1 -

Question 9 of 79



A frail 82 year old gentleman was brought in by his daughter, who found him on the floor in his flat. He had tripped in a mechanical and had been unable to get back up, lying on the floor for the past 3 days. On examination, he appears extremely dehydrated but has no specific focal weakness, systemic examination is unremarkable. He has sustained no musculoskeletal injuries. His blood tests are as follows:

Na ⁺	168 mmol/l
K ⁺	6.0 mmol/l
Urea	24 mmol/l
Creatinine	260 µmol/l (baseline 107 three months ago)
Creatinine kinase	11,000 mmol/l

ECG shows normal sinus rhythm at 99/ minute.

You diagnose him with rhabdomyolysis and an acute kidney injury, likely of pre-renal cause. Intravenous fluid rehydration is initiated with intravenous 5% dextrose. You ask your colleague to check the patients blood tests in 12 hours.

What is the aim in correcting the patients hypernatraemia?

	Reduce blood sodium to under 145 mmol/l as quickly as possible
	Reduce blood sodium by 0.5mmol/hr. The drop in 12 hours should be no greater than 6 mmol/l
	Reduce blood sodium by 1mmol/hr. The drop in 12 hours should be no greater than 12 mmol/l
	Aim for blood sodium above 145 mmol/l
	Blood sodium does not require monitoring if intravenous fluids is running, CK falling and renal function improving

Question 9 of 79



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	Reduce blood sodium by 1mmol/hr. The drop in 12 hours should be no greater than 12 mmol/l
	Aim for blood sodium above 145 mmol/l
	Blood sodium does not require monitoring if intravenous fluids is running, CK falling and renal function improving

□ Question 10 of 79

□ □

A 36-year-old woman is reviewed 3 months post-partum. During the pregnancy she was diagnosed with gestational diabetes. Following the delivery her glycaemic control has failed to improve and she has been diagnosed as having type 2 diabetes mellitus. She is only slightly overweight (body mass index 27.1 kg/m²) and you are worried about missing maturity onset diabetes of the young (MODY) or type 1 diabetes. Which one of the following is most suggestive of MODY?

	Ketosis during periods of hyperglycaemia
	Family history of early onset diabetes mellitus
	A history of polycystic ovarian syndrome
	Lack of response to sulphonylureas
	A history of autoimmune disease

Dashboard

Overall score: 0%

1 -

Question 10 of 79

□ □

A 36-year-old woman is reviewed 3 months post-partum. During the pregnancy she was diagnosed with gestational diabetes. Following the delivery her glycaemic control has failed to improve and she has been diagnosed as having type 2 diabetes mellitus. She is only slightly overweight (body mass index 27.1 kg/m²) and you are worried about missing maturity onset diabetes of the young (MODY) or type 1 diabetes. Which one of the following is most suggestive of MODY?

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	Lack of response to sulphonylureas
	A history of autoimmune disease

Dashboard

Overall score: **0%**

1 -

□ Question 11 of 79



A 45 year-old woman presents to her GP with an ulcer on her left shin. It has been present for the past 4 months and gradually got bigger. It is tender and yellow-brown in colour and there appears to be another smaller lesion that is growing next to the bigger one. She has a past medical history of multiple sclerosis, of which she is currently in remission phase and type 1 diabetes mellitus. Her only regular medication includes insulin.

What is the most appropriate treatment?

	Flucloxacillin
	Topical corticosteroids
	TED stockings
	Oral corticosteroids
	Topical tacrolimus

Dashboard

Overall score: 0%

1 -

Question 11 of 79



A 45 year-old woman presents to her GP with an ulcer on her left shin. It has been present for the past 4 months and gradually got bigger. It is tender and yellow-brown in colour and there appears to be another smaller lesion that is growing next to the bigger one. She has a past medical history of multiple sclerosis, of which she is currently in remission phase and type 1 diabetes mellitus. Her only regular medication includes insulin.

What is the most appropriate treatment?

	Flucloxacillin
	Topical corticosteroids
	TED stockings
	Oral corticosteroids
	Topical tacrolimus

Dashboard

Overall score: **0%**

1 -

□ Question 12 of 79



A 22-year-old student comes to the Emergency department with a cough productive of rusty coloured sputum. She has been suffering from increased shortness of breath, night sweats and fevers for the past 48 hours. Current medication includes daily hydrocortisone for congenital adrenal hyperplasia and the combined oral contraceptive pill. Current bloods are shown below:

Hb	131 g/l	Na ⁺	134 mmol/l
Platelets	201 * 10 ⁹ /l	K ⁺	4.1 mmol/l
WBC	14.9 * 10 ⁹ /l	Urea	7.0 mmol/l
Neuts	10.1 * 10 ⁹ /l	Creatinine	82 µmol/l
Lymphs	1.2 * 10 ⁹ /l	CRP	185 mg/l
Eosin	0.4 * 10 ⁹ /l		

Which of the following is the most appropriate way to manage her steroid hormone replacement?
How should you manage her steroid replacement?

	Convert to 200mg hydrocortisone IV BD
	Increase the daily dose by 50%
	Increase the daily dose by 100%
	Reduce the daily dose by 50%
	Keep the daily dose the same

□ Question 12 of 79



A 22-year-old student comes to the Emergency department with a cough productive of rusty coloured sputum. She has been suffering from increased shortness of breath, night sweats and fevers for the past 48 hours. Current medication includes daily hydrocortisone for congenital adrenal hyperplasia and the combined oral contraceptive pill. Current bloods are shown below:

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How should you manage her steroid replacement?

	Convert to 200mg hydrocortisone IV BD
	Increase the daily dose by 50%
	Increase the daily dose by 100%
	Reduce the daily dose by 50%
	Keep the daily dose the same

□ Question 13 of 79



A 60-year-old woman presents to her GP complaining of a swelling in her neck. She has a past medical history of rheumatoid arthritis and Sjogren's syndrome.

On examination of the neck there was a mildly nodular, firm, rubbery goitre.
Thyroid function tests are shown below:

Total serum thyroxine	10 µg/dl (4.5-13.6)
Thyroid stimulating hormone	1.2 µU/ml (0.4-3.6)
Anti-thyroid peroxidase titre	Increased

Which is the most likely diagnosis?

	Sick euthyroid syndrome
	Graves disease
	Hashimoto's thyroiditis
	Silent lymphocytic thyroiditis
	Subacute thyroiditis

Dashboard

Overall score: 0%

1 -

□ Question 13 of 79



A 60-year-old woman presents to her GP complaining of a swelling in her neck. She has a past medical history of rheumatoid arthritis and Sjogren's syndrome.

On examination of the neck there was a mildly nodular, firm, rubbery goitre.
Thyroid function tests are shown below:

Total serum thyroxine	10 µg/dl (4.5-13.6)
Thyroid stimulating hormone	1.2 µU/ml (0.4-3.6)
Anti-thyroid peroxidase titre	Increased

Which is the most likely diagnosis?

<input type="radio"/>	Sick euthyroid syndrome
<input type="radio"/>	Graves disease
<input checked="" type="radio"/>	Hashimoto's thyroiditis
<input type="radio"/>	Silent lymphocytic thyroiditis
<input type="radio"/>	Subacute thyroiditis

Dashboard

Overall score: **0%**

1 -

Question 13 of 79

A 60-year-old woman presents with weight loss, fatigue, and joint pain. She has a long history of rheumatoid arthritis and Sjögren's syndrome.

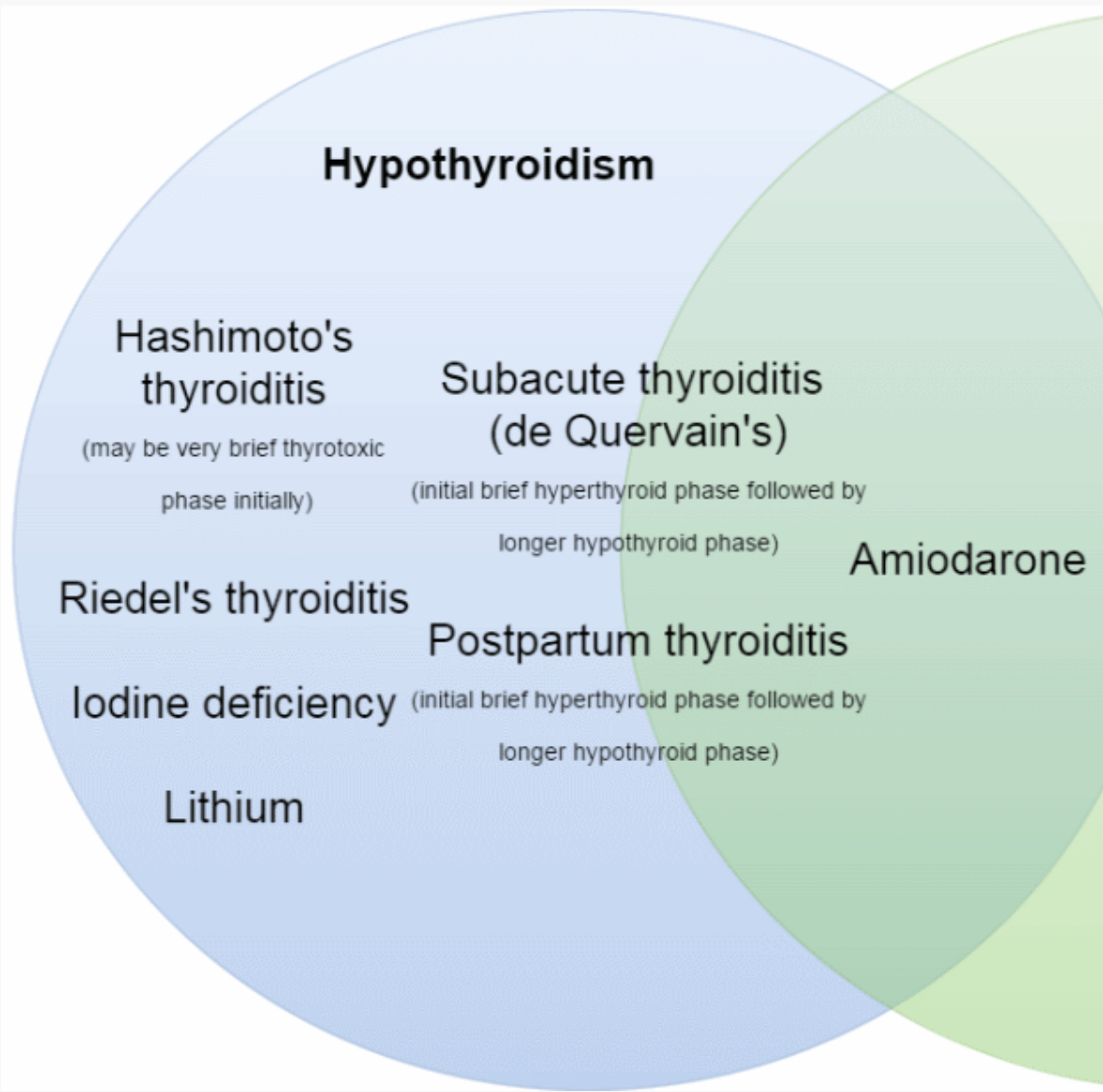
On examination of the neck, the thyroid gland is enlarged and firm.

Thyroid function tests are shown below.

Total serum thyroxine
Thyroid stimulating hormone
Anti-thyroid peroxidase titre

Which is the most likely diagnosis?

<input type="radio"/>	Sick euthyroid syndrome
<input type="radio"/>	Graves disease
<input checked="" type="radio"/>	Hashimoto's thyroiditis
<input type="radio"/>	Silent lymphocytic thyroiditis
<input type="radio"/>	Subacute thyroiditis



Dashboard

Overall score: 0%

1 -

□ Question 14 of 79



A 72-year-old Japanese female presents to the emergency department with sudden onset shortness of breath associated with palpitations. She has previously experienced similar palpitations 6 months ago but did not seek medical attention. She was last completely well and described by her daughter to be at baseline 24 hours ago when they had dinner together. The patient denies any chest pain, nausea, vomiting or sweating. On examination, the patient is pyrexial at 38.2 degrees and tachycardic, with a regular pulse at 130-140 beats per minute. Heart sounds demonstrate a gallop rhythm; auscultation of her chest reveals bibasal inspiratory coarse crackles and no wheeze. She has bilateral mild lower limb pitting oedema to low ankles. Examination of the abdominal and neurological systems is unremarkable. A chest radiograph demonstrates bibasal alveolar shadowing with mild bilateral pleural effusions. An ECG demonstrates sinus tachycardia at 130 beats per minute. Blood tests are as follows:

Hb	123 g/l
Platelets	299 * 10 ⁹ /l
WBC	9.5 * 10 ⁹ /l

Na ⁺	139 mmol/l
K ⁺	4.2 mmol/l
Urea	7.2 mmol/l
Creatinine	98 µmol/l

TSH	< 0.01 mU/l
Free T4	140 pmol/l
Free T3	40 pmol/l

Nursing staff have kindly taken blood cultures and taken measures to cool the patient. What is the next most appropriate immediate treatment?

--	--

	Intravenous propranolol
	Lugol's iodine
	Oral carbimazole
	Oral propylthiouracil
	Oral prednisolone

Dashboard

Overall score: **0%**

1 -

□ Question 14 of 79



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	Oral propylthiouracil
	Oral prednisolone

Dashboard

Overall score: **0%**

1 -

☐ Question 15 of 79

A 78-year-old man with type 2 diabetes mellitus is reviewed in the diabetes clinic. He is currently taking metformin 1g bd. He also has a history of hypertension and hypothyroidism. His HbA1c one year ago was 44 mmol/mol (6.2%). The most recent test is reported as 46 mmol/mol (6.4%). What is the most appropriate next step in management?

<input type="checkbox"/>	Increase dose of metformin
<input type="checkbox"/>	Add glimepiride
<input type="checkbox"/>	Add sitagliptin
<input type="checkbox"/>	Add pioglitazone
<input type="checkbox"/>	Make no changes

Dashboard

Overall score: 0%

1 -

□ Question 15 of 79



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	Add pioglitazone
	Make no changes

Dashboard

Overall score: **0%**

1 -

□ Question 15 of 79

□ □

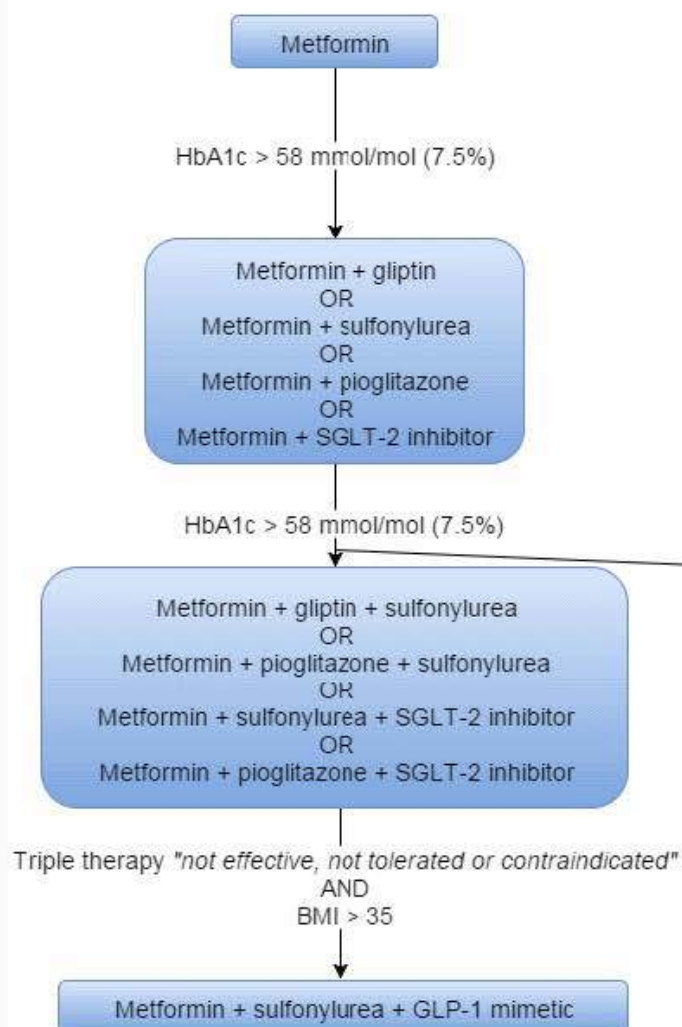
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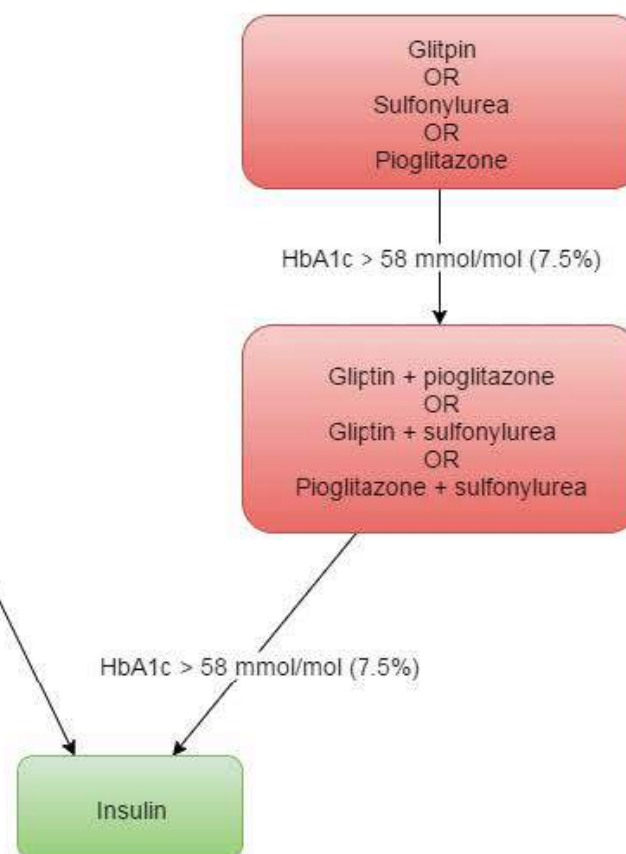
Dashboard

Overall score: **0%****1** -

Metformin



Metformin not tolerated or CI



Question 15 of 79

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<input type="radio"/>	Add pioglitazone
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Primary prevention

(10-year cardiovascular risk $\geq 10\%$ OR
most type 1 diabetics OR
CKD if eGFR $< 60\text{ml/min/m}^2$)



Atorvastatin 20mg od

(if non-HDL has not fallen by $\geq 40\%$ then
consider titrating up to 80mg)

Dashboard

Overall score: **0%**

1 -

Question 16 of 79



An 18-year-old migrant from Syria presents to you after recent successful application for asylum. He has no family with him in the country. Since he can remember he gets severe burning pain and tingling in the hands and feet, particularly after exertion or when weather temperatures are extremely hot or cold. He remembers once having a transient episode of slurred speech and right facial droop that lasted less than 24 hours. He has never had the opportunity to consult about his problems. Physical examination reveals a rash of blue-black telangiectasia across his trunk and a mid-systolic murmur heard loudest in the apex and radiating into the axilla. The examination is otherwise unremarkable. He recalls that his younger brother, who died some years ago, had similar problems and his sister, who he is no longer in touch with, seems to have not had any problems. Which of the following findings is consistent with the underlying diagnosis?

	Positive anticentromere antibodies
	Deficiency in plasma levels of alpha-galactosidase
	Aortic coarctation visualised by aortic angiography
	Raised HBA1C
	Excessive excretion of mucopolysaccharides in urine

Dashboard

Overall score: 0%

1 -

□ Question 16 of 79

□ □

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Dashboard

Overall score: 0%

1 -

□ Question 17 of 79



A 27-year-old woman who is 11 weeks pregnant comes for review. This is her second pregnancy. During her first pregnancy she was diagnosed with gestational diabetes which resolved following the birth of her son. What is the most appropriate management at this stage?

	Perform an oral glucose tolerance test
	Advise on a diabetic diet and start metformin at 20 weeks
	Arrange a fasting glucose
	Arrange a HbA1c test
	Advise on a diabetic diet and start insulin at 20 weeks

Dashboard

Overall score: 0%

1 -

□ Question 17 of 79

□ □

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	Arrange a HbA1c test
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Dashboard

Overall score: **0%**

1 -

□ Question 18 of 79



A 48-year-old man is referred to the outpatient department by his GP, having experienced tremor, heat intolerance and 2 kg weight loss over the last 6 weeks. His past medical history includes having atrial fibrillation for which he takes warfarin and amiodarone. He is a non-smoker and drinks on average 10 units of alcohol per week.

Blood tests are performed and reveal:

Hb	142 g/l	
Platelets	$220 \times 10^9/l$	
WBC	$7.2 \times 10^9/l$	
Na ⁺	140 mmol/l	
K ⁺	4.2 mmol/l	
Urea	4.5 mmol/l	
Creatinine	45 μ mol/l	
Thyroid stimulating hormone (TSH)	0.03 mu/l	
Free thyroxine (T4)	29 pmol/l	
Total T3 (TT3)	252 ng/dL	Normal range 75 -200 ng/dL

A colour flow Doppler sonography of the thyroid is performed and shows absent vascularity and gland destruction.

What is the most likely diagnosis?

	Type 1 amiodarone-induced thyrotoxicosis
	Type 2 amiodarone-induced thyrotoxicosis
	Grave's disease

	Hashimotos thyroiditis
	De Quervains thyroiditis

Dashboard

Overall score: **0%**

1 -

Question 18 of 79



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	Grave's disease

	Hashimotos thyroiditis
	De Quervains thyroiditis

Dashboard

Overall score: **0%**
1 -

□ Question 19 of 79



A 27-year-old female was seen in the general medicine outpatient clinic following a referral by her GP. She had presented to her GP feeling generally tired for the last few months. Her GP organised a blood screen revealing no abnormalities except the presence of a potassium level of 2.8 mmol/l. Her GP subsequently repeated the test four weeks later revealing a level of 2.6 mmol/l, leading to the referral to the clinic. Other than the tiredness she was well in herself, denying all other symptoms. She denied specifically the presence of any cardiovascular and muscular symptoms and had never collapsed. Her past medical history was unremarkable and she was taking no prescribed medication. There was no family history of note.

Examination revealed a well 27-year-old lady. Her blood pressure was 108/78 mmHg, heart rate 82 bpm and BMI 23kg/m². Examination of her cardiovascular and respiratory systems revealed the presence of normal heart sounds, a JVP of 3cm and warm well perfused peripheries. Examination of her gastrointestinal and neurological systems was unremarkable.

Investigations conducted at the clinic revealed the following results:

Hb	122 g/l
Platelets	242 * 10 ⁹ /l
WBC	7.8 * 10 ⁹ /l

Na ⁺	132 mmol/l
K ⁺	2.5 mmol/l
Urea	7.2 mmol/l
Creatinine	68 µmol/l
Bicarbonate	37 mmol/l

Serum renin	824 (NR 100-500 pmol/l)
Serum aldosterone	82 (NR 55-250 pmol/l)

TSH	1.2 mu/l
-----	----------

24 hour urine result:

Na+	28 (NR <20mmol/L if hyponatraemia)
K+	45 (NR <10mmol/l if hypokalaemic)
Calcium	0.8 (NR <7.5 mmol/24hrs)

What is the most likely diagnosis?

<input type="radio"/>	Addison's disease
<input type="radio"/>	Gitelman's syndrome
<input type="radio"/>	Conn's disease
<input type="radio"/>	Bartter's syndrome
<input type="radio"/>	Laxative abuse

Dashboard

Overall score: **0%**

1 -

□ Question 19 of 79



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Dashboard

Overall score: **0%**

1 -

Question 20 of 79

A 79-year-old lady with a body mass index of 31 kg/m² attends clinic complaining of increasing tiredness. She is found to have a random glucose reading of 15.5 mmol/L and a recent HbA1c of 7.5%. She is currently on metformin 1g twice daily and recently stopped gliclazide due to hypoglycaemic episodes.

Which drug therapy should be added next to further control her glucose readings?

	Sitagliptin
	Insulin
	Glimepiride
	Liraglutide
	Canagliflozin

Dashboard

Overall score: 0%

1 -

Question 20 of 79

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Dashboard

Overall score: **0%**

1 -

Question 20 of 79

□ □

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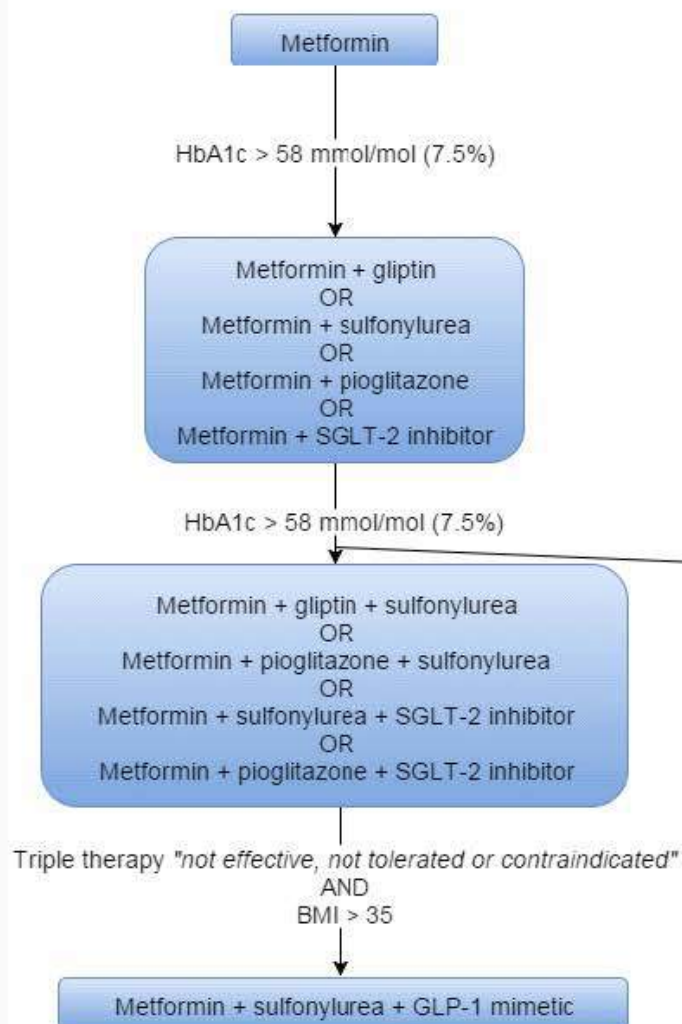
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	Insulin
	Glimepiride
	Liraglutide
	Canagliflozin

Dashboard

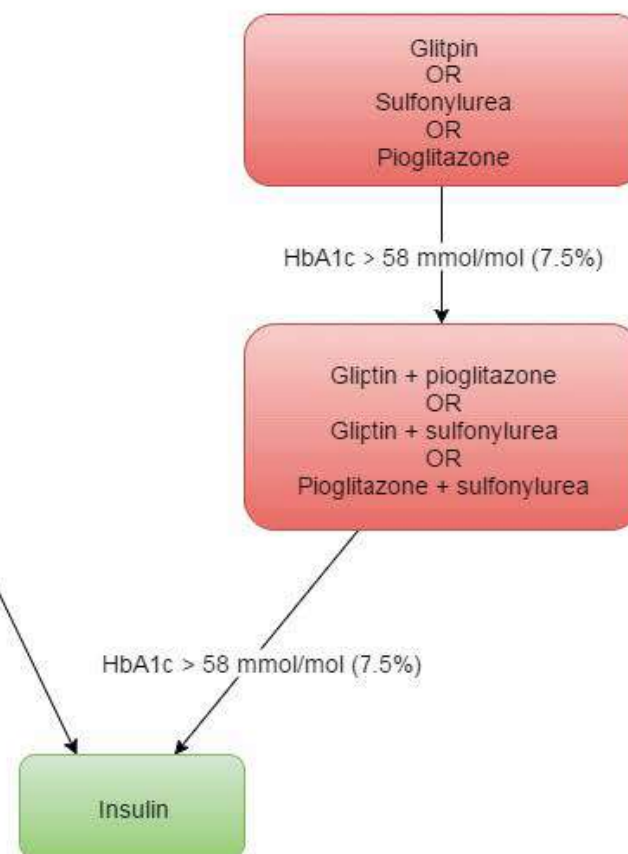
Overall score: **0%**

1 -

Metformin



Metformin not tolerated or CI



Question 20 of 79

A 79-year-old lady with a blood pressure of 160/90 mmHg has been found to have a random glucose reading of 12 mmol/L on a daily and recently stopped glyceryl triacetate.

Which drug therapy should be initiated?

<input checked="" type="checkbox"/>	Sitagliptin
<input type="checkbox"/>	Insulin
<input type="checkbox"/>	Glimepiride
<input type="checkbox"/>	Liraglutide
<input type="checkbox"/>	Canagliflozin

Primary prevention

(10-year cardiovascular risk $\geq 10\%$ OR
most type 1 diabetics OR
CKD if eGFR $< 60\text{ml/min/m}^2$)



Atorvastatin 20mg od

(if non-HDL has not fallen by $\geq 40\%$ then
consider titrating up to 80mg)

Dashboard

Overall score: **0%**

1 -

□ Question 21 of 79



A 15-year-old girl was seen in clinic with lethargy, weakness worsening over the past 4 weeks. She also complains of recurrent muscle cramps in her legs, causing her to have trouble sleeping. On further questioning she admits to urinary frequency, passing urine up to ten times a day, and feels dehydrated all the time. She has also previously been diagnosed with cyclical vomiting syndrome and vomits 2-3 times a week.

On examination, she is thin, with a body mass index of 17.5kg/m². Her heart rate is 89 bpm and blood pressure is 103/76 mmHg.

The results of the investigations at the clinic are as follow:

C Reactive protein	3 mg/l
Haemoglobin	158 g/l
White cell count	$7.6 \times 10^9/L$
Na+	136 mmol/l
K+	2.9 mmol/l
Urea	7.2 mmol/l
Creatinine	108 μ mol/l
Corrected calcium	2.42 mmol/l
Serum renin levels	8.6 ng/ml/hr
Serum aldosterone levels	750 ng/l

Urine chloride levels	90 mmol/l
Urine sodium concentration	88 mmol/l
Urine potassium levels	49 mmol/l
Urine calcium:creatinine ratio	0.3 (high)

Venous blood gas result

pH	7.532
Bicarbonate	37 mmol/l

Which of the following diagnosis would be consistent with the above clinical picture?

	Liddle's syndrome
	Conn's syndrome
	Familial idiopathic hypercalciuria
	Bartter's syndrome
	Gitelman's syndrome

Dashboard

Overall score: 0%

1 -

□ Question 21 of 79



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	Conn's syndrome
	Familial idiopathic hypercalciuria
	Bartter's syndrome
	Gitelman's syndrome

Dashboard

Overall score: 0%

1 -

□ Question 22 of 79



A 49-year-old man presents with feeling under the weather. On further questioning he reports that he has been feeling tired and weak for the past few weeks and his wife has noticed that he has lost some weight, although he states that his appetite has not decreased and if anything he is feeling more thirsty and going to the toilet several times a night. Over the last couple of days he has noticed a rash develop around his groin, which is now present on his buttocks. On examination, there are patches of red with irregular borders and crusting.

A fasting blood test is arranged and reveals a blood glucose of 9.2 mmol/l.

What is the next most appropriate investigation?

	Plasma insulin level
	Tissue transglutaminase antibody (TTA) test
	Plasma glucagon level
	Skin biopsy
	Plasma zinc level

Dashboard

Overall score: 0%

1 -

Question 22 of 79

□ □

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Dashboard

Overall score: **0%**

1 -

□ Question 23 of 79



A 23 year old woman with known type 1 diabetes mellitus is brought to the emergency department resus area unwell. On taking her history she mentions that she has had a cough for the past three days with fevers, and today she developed vague abdominal pain. A blood gas take on admission shows:

pH	7.21
pO ₂	14.8 kPa
pCO ₂	3.1 kPa
Bicarbonate	14 mEq/L
Base excess	-10.5 mmol/L
Na ⁺	145 mmol/L
K ⁺	5.3 mmol/L
Glucose	40.1 mmol/L
Lactate	2.3 mmol/L

Urinalysis:

Leucocytes	-
Blood	-
Glucose	+++
Ketones	++++

The patient has been given 500mls of 0.9% saline as a stat bag, followed by a further 1L of 0.9% saline over 60 minutes, and her observations are as follows:

Respiratory rate	25 breaths/minute
Saturations	99% on 2L

Temperature	37.7°C
Blood pressure	106/67 mmHg
Heart Rate	102 beats/minute

The nurses weigh her at 60 Kg

Her lab results are pending

Which fluid and insulin regimen would be the most appropriate at her current stage?

	1L of 0.9% Normal Saline with 20mmol of KCl added given over 2 hours + IV insulin at 6 units per hour.
	1L of 0.9% Normal Saline with 40mmol of KCl added given over 2 hours + IV insulin at 6 units per hour.
	1L of 0.9% Normal Saline with 20mmol of KCl added given over 2 hours + Sliding scale IV insulin based on capillary blood sugar readings
	1L of 0.9% Normal Saline with 20mmol of KCl added given over 2 hours + 1L of 1.26% sodium bicarbonate solution over 8h + IV insulin at 6 units per hour.
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Dashboard

Overall score: **0%**

1 -

□ Question 23 of 79



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Lactate	2.3 mmol/L

Urinalysis:

Leucocytes	-
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Dashboard

Overall score: **0%**

1 -

□ Question 24 of 79



A 42-year-old woman is referred to the endocrine clinic. She is treated with lithium for bipolar disorder and presents with weight gain, lethargy, a dry cough and a hoarse voice over the past 3 months. Examination reveals patchy hair loss, a smooth goitre, and she is overweight with a body mass index of 32 kg/m². Her blood pressure is 122/82 mmHg, pulse is 60 beats per minute.

Investigations:

Na+	130 mmol/l
TSH	14.2 mIU/l

Which of the following is the most appropriate way to manage her?

	Iodine supplementation
	Start prednisolone
	Stop lithium
	Surgical thyroidectomy
	Start thyroxine

Dashboard

Overall score: 0%

1 -

Question 24 of 79



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Dashboard

Overall score: **0%**

1 -

Question 24 of 79

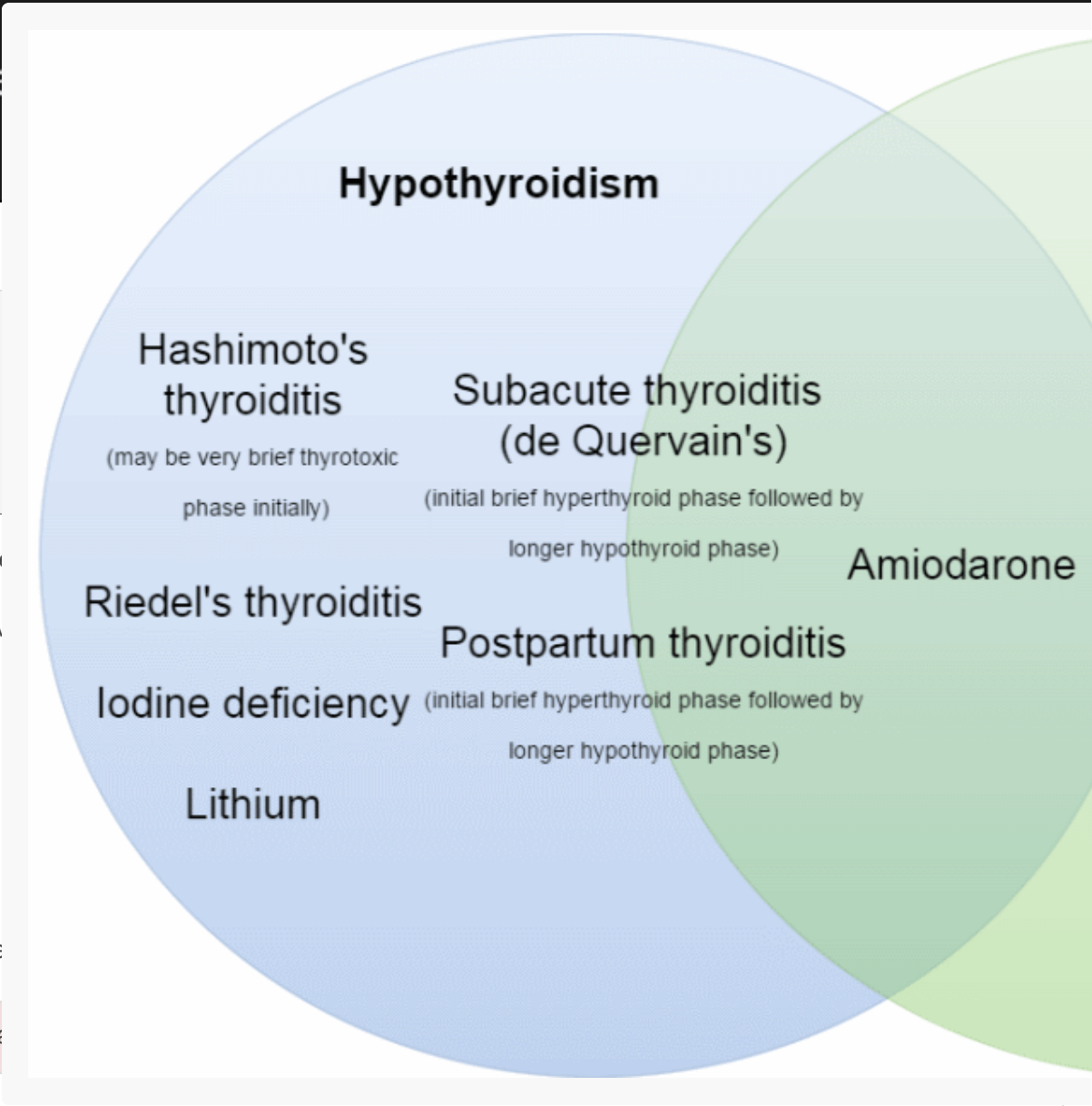
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Which of the following is the

	Iodine supplements
	Start prednisolone
	Stop lithium
	Surgical thyroidectomy
	Start thyroxine



Dashboard

Overall score: 0%

1 -

□ Question 25 of 79



A 72 year old female presents with 5 days of generally decline and a recent productive urinary tract infection, treated with oral antibiotics in the community by the GP. She is known to be a type two diabetic, diagnosed 28 years ago and insulin dependent for the past 6 years. She is normally on 46 units lantus, 23 units TDS novorapid. On examination, she is not orientated in time or place, GCS 14/15. She has no focal neurology, chest and cardiovascular auscultation are unremarkable. You demonstrate suprapubic tenderness on deep palpation but abdomen is other soft and nontender, bowel sounds are present. She appears extremely dehydration: her mucous membranes are dry, peripheries cool with capillary refill time of 4 seconds and JVP +1 cm above the angle of Louis. Her blood sugar is 31mmol/L and a venous blood gas demonstrates pH 7.22, lactate 2 mmol/l, ketones 5 mmol/l. A urine dip is awaited. What is the most likely diagnosis?

	Hyperglycaemic hyperketotic state
	Hyperglycaemia secondary to poor medical compliance during recent acute illness
	Urosepsis secondary to inadequately treated UTI
	Diabetic ketoacidosis
	Dehydration secondary to poor oral intake

Dashboard

Overall score: 0%

1 -

Question 25 of 79



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Dashboard

Overall score: **0%**

1 -

□ Question 26 of 79



A 68-year-old Indian patient presents to the emergency department with facial tetany, muscle cramps and paraesthesia of her fingers and toes. This is her second admission with similar symptoms. Her past medical history includes diffuse cutaneous systemic sclerosis with gastrointestinal, cutaneous and pulmonary manifestations. She was also diagnosed with vitamin D deficiency two years ago and receives regular vitamin D supplements. Her blood tests are as follows:

Hb	124 g/l
WBC	$8.0 \times 10^9/l$
Na ⁺	141 mmol/l
K ⁺	4.3 mmol/l
Urea	6.5 mmol/l
Creatinine	90 μ mol/l
CRP	15 mg/l
Corrected calcium	1.68 mmol/l
Phosphate	1.4 mmol/l
Magnesium	0.28 mmol/l
PTH	2 pmol/L (normal range = 8.5-12)
Amylase	14 u/l

Her symptoms improve with intravenous calcium replacement and intravenous magnesium replacement, correcting both electrolytes to within normal range. What is the underlying cause for these metabolic disturbances in this patient?

	Hypomagnesaemia
	Primary hypoparathyroidism
	Insufficient vitamin D supplementation

	Chronic kidney failure
	Chronic pancreatitis

Dashboard

Overall score: 0%

1 -

□ Question 26 of 79



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	Chronic kidney failure
	Chronic pancreatitis

Dashboard

Overall score: **0%**
1 -

□ Question 27 of 79



A 38-year-old woman is referred by her GP for management of Graves' disease, diagnosed by the presence of a goitre, suppressed thyroid stimulating hormone, and presence of thyroid antibodies on screening. She has no past medical history of note, drinks 10 units of alcohol per week and smokes 20 cigarettes per day. On examination her blood pressure is 112/88 mmHg, pulse is 89 beats per minute and regular, she has a fine tremor. There is a smooth goitre and marked proptosis.

Which of the following has the greatest negative impact on prognosis of her thyroid eye disease?

	Alcohol consumption
	Cigarette smoking
	DR4 HLA type
	LATS titre
	Use of block replace therapy

Dashboard

Overall score: 0%

1 -

□ Question 27 of 79



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	Alcohol consumption
	Cigarette smoking
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	LATS titre
	Use of block replace therapy

Dashboard

Overall score: **0%**

1 -

□ Question 28 of 79



A 24 year old student nurse is brought to the Emergency Department having collapsed at work. Apart from depression for which she takes sertraline, she has no other past medical history. This is her third collapse in a month. On each attendance capillary blood glucose measurements have been < 4mmol/L. An oral glucose tolerance test performed two weeks previously by her GP was normal.

Today:

C-peptide	3.9ng/ml (0.8 - 3.1ng/ml)
Glucose	3.4mmol/L

What is the most appropriate next investigation?

	Early morning C-peptide levels
	Toxicology screen
	CT scan of pancreas
	No further investigations, advise her to stop self-administering insulin
	72 hour fast

Dashboard

Overall score: 0%

1 -

Question 28 of 79

□ □

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	Toxicology screen
	CT scan of pancreas
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Dashboard

Overall score: **0%**

1 -

Question 29 of 79

You receive a phone call from a general practitioner regarding a 50 year-old man who has had thyroid function tests performed for a history of weight loss. There is no history of illicitly taking levothyroxine. His results show : TSH 0.01 mIU/L, T4 8.5 ug/dL. You should advise which of the following:

<input type="checkbox"/>	Admit for urgent MRI head
<input type="checkbox"/>	Repeat the bloods and include parathyroid hormone (PTH)
<input type="checkbox"/>	Add on T3 as this may represent T3 toxicosis
<input type="checkbox"/>	Start radio-iodine treatment immediately
<input type="checkbox"/>	Start thyroxine replacement

Dashboard

Overall score: 0%

1 -

□ Question 29 of 79

□ □

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	Start thyroxine replacement

Dashboard

Overall score: **0%****1** -

□ Question 30 of 79



A 60-year-old man presented with history of excessive urination especially during night which disturbs his sleep, excessive thirst and tiredness for the past 2 months. He was a known HIV positive patient for which he was on highly active anti-retroviral therapy (HAART) since 6 months. Clinical examination was within normal limits. HIV related diabetes mellitus was suspected by the treating physician. His blood investigations are as follows-

Hb	150 g/l
Platelets	$150 \times 10^9/l$
WBC	$7 \times 10^9/l$
Fasting blood glucose	10 mmol/l
Post prandial blood glucose	13.9 mmol/l
Serum creatinine	130 $\mu\text{mol/L}$

He was planned to be started on metformin therapy. Which of the following investigations is important to be checked before starting metformin in this patient?.

	Liver enzymes
	Venous lactate
	Serum triglycerides
	Serum albumin
	Serum ammonia

Question 30 of 79



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	Liver enzymes
	Venous lactate
	Serum triglycerides
	Serum albumin
	Serum ammonia

□ Question 31 of 79



A 19-year-old man is brought by ambulance to the emergency department. The patient himself was too unwell to provide a coherent history but his mother reports that he had been very unwell with loss of appetite and abdominal pain for the past two days. She had also noted a significant weight loss in her son over the past six months and that he had been unusually fatigued over the same time period. The patient had no previous family history although his older sister had recently been diagnosed with pernicious anaemia.

Examination showed the patient to be tachypnoeic and tachycardic with a central capillary refill time of six seconds. Respiratory and cardiovascular examination was otherwise unremarkable. Abdominal examination revealed some inconsistent tenderness without obvious signs of localised peritonism.

Please see below for results of initial investigations.

Urea	10.6 mmol / L
Creatinine	134 micromol / L
Sodium	149 mmol / L
Potassium	5.8 mmol / L
Fingerpick blood glucose	42 mmol / L
Fingerpick blood ketones	7.5 mmol / L

Venous blood gas (room air)

pH	7.09
PCO ₂	16 mmHg (reference 32-43)
PO ₂	52 mmHg (reference 70-100)
Bicarbonate	10.9 mmol / L (reference 20.0-26.0)
Chloride	107 mmol / L (reference 99-108)
Lactate	4.9 mmol / L

Portable chest x-ray: poor quality film secondary overlying artefact; no free air under diaphragm, lung fields clear, no pneumothorax.

Electrocardiogram: sinus tachycardia at 129; normal intervals and axis; QRS morphology normal; T wave morphology normal.

What is the correct immediate management for this patient?

	1000 mg calcium gluconate
	10 mL 8.4 % sodium bicarbonate
	1000 mL 0.9 % saline
	1000 ml 0.45 % saline
	Intravenous insulin bolus

Dashboard

Overall score: 0%

1 -

□ Question 31 of 79



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	Intravenous insulin bolus

Dashboard

Overall score: **0%**

1 -

Question 32 of 79



A 45-year-old lady is admitted to hospital with abdominal pain and malaise. She has no past medical history and takes no regular medications or supplements. Bloods tests show:

Ca 2^{++} 2.70 mmol/l

PO₄ $^{+}$ 1.2 mmol/l

Creatinine 60 μ mol/l

Chest X-ray - normal appearances

She denies taking any medications or supplements. Her chest X-ray is normal in appearance, and renal function normal. You ring the GP and find out her calcium was also slightly raised 8 years ago. What is the most likely diagnosis?

	Secondary hyperparathyroidism
	Malignancy with bony metastasis
	Primary hyperparathyroidism
	Familial hypocalciuric hypercalcaemia
	Sarcoidosis

Dashboard

Overall score: **0%**

1 -

Question 32 of 79



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	Primary hyperparathyroidism
	Familial hypocalciuric hypercalcaemia
	Sarcoidosis

Dashboard

Overall score: **0%**

1 -

□ Question 33 of 79



A 49-year-old man with a history of alcoholism has been admitted to the ward for a detoxification program. He was brought to the hospital by police in an intoxicated state. He has been treated with B vitamin replacement therapy and has now begun re-feeding. You are asked to see him because of acute shortness of breath and generalised muscle weakness. On examination his blood pressure is 100/80 mmHg, pulse is 86 beats per minute and regular. He has bilateral crackles on auscultation of his chest consistent with heart failure, and global 4/5 power weakness.

Which of the following is the most likely cause of his symptoms?

	Low thiamine
	Low phosphate
	Low potassium
	Low folate
	Low magnesium

Dashboard

Overall score: 0%

1 -

□ Question 33 of 79



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	Low phosphate
	Low potassium
	Low folate
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Dashboard

Overall score: 0%

1 -

□ Question 34 of 79



A 74-year-old man who has end stage cardiac failure with an ejection fraction of 32% and recurrent ventricular tachycardia comes to the Emergency department for review. He has been losing weight and suffering from increasing palpitations over the past few weeks. Medication of note includes amiodarone. On examination his blood pressure is 95/70 mmHg, his pulse is 130 beats per minute, (atrial fibrillation), and there is evidence of left ventricular failure.

His GP has checked his thyroid function tests, the results of which are shown below:

TSH	<0.05 mU/l
Free T3	10.3 pmol/l
Free T4	29.0 pmol/l

What is the most appropriate treatment?

	Carbimazole
	Perchlorate
	Prednisolone
	Propylthiouracil
	Thyroxine

Dashboard

Overall score: 0%

1 -

□ Question 34 of 79



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Dashboard

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1 -

Question 34 of 79

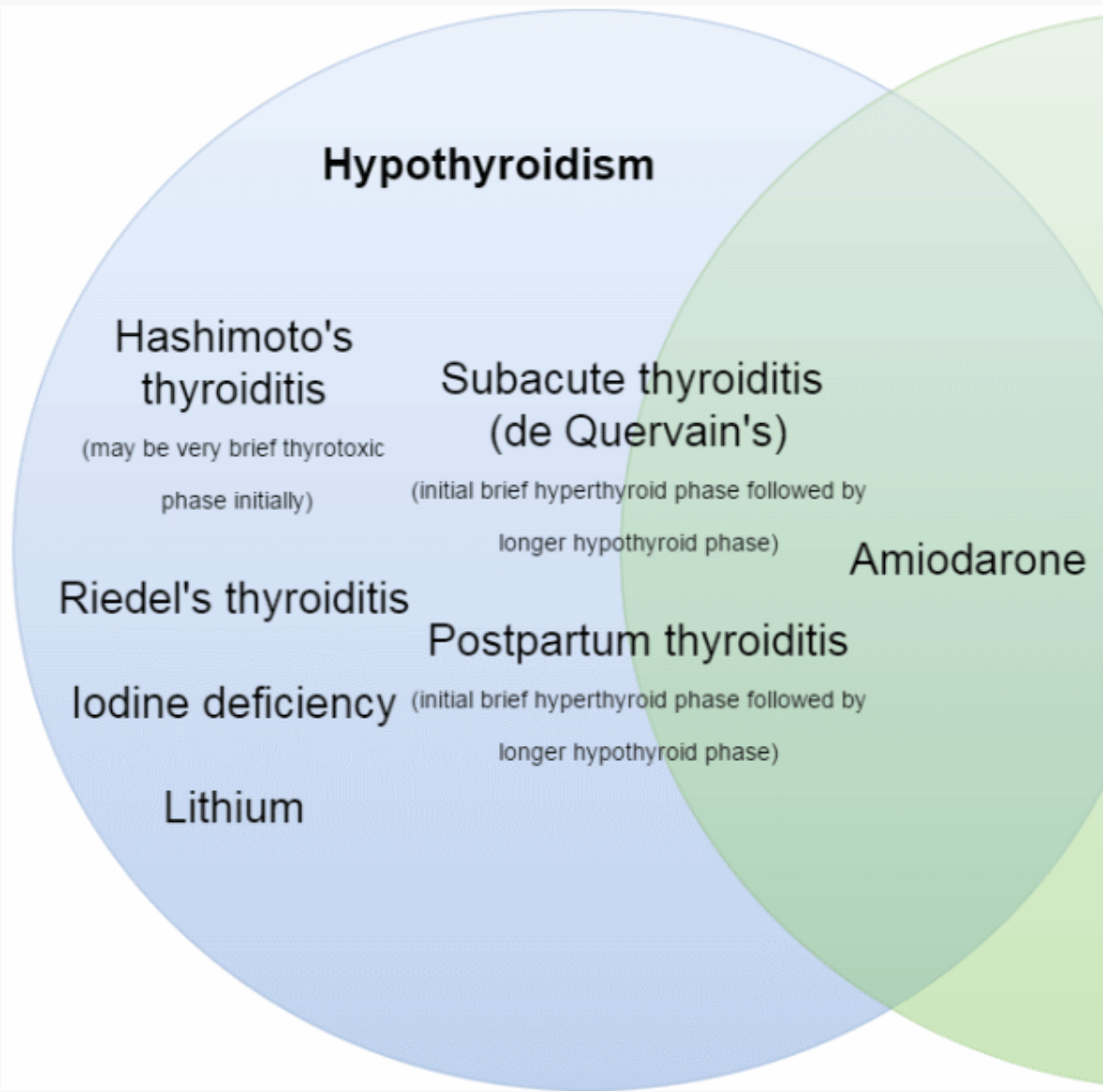
A 74-year-old man who has tachycardia comes to the Emergency Department with palpitations over the past few days. His blood pressure is 95/70 mmHg, his pulse is 110 bpm.

His GP has checked his thyroid function tests and found:

TSH	<0.05 mU/l
Free T3	10.3 pmol/l
Free T4	29.0 pmol/l

What is the most appropriate treatment?

	Carbimazole
	Perchlorate
	Prednisolone
	Propylthiouracil
	Thyroxine



□ Question 35 of 79



A 55-years-old male presents with a 4 week history of persistent diarrhoea and transient shortness of breath, which he describes to have been very similar to his childhood asthma. He has no other past medical history, is a builder and smokes 10 cigarettes per day for the past 30 years. He drinks minimal alcohol. On examination, you note the patient has a very red face, no clubbing and soft and non-tender abdomen. Cardiovascular examination reveals a mid diastolic murmur loudest at the left sternal border. Respiratory examination is unremarkable. blood pressure is 86/49 mmHg, heart rate 112 beats/min, sats 96% on air and respiratory rate 20 breaths/ min. Which test is most likely to be diagnostic?

	Urinary serotonin
	Lung function tests
	24 hour urinary 5HIAA
	Plasma chromogranin A
	Echocardiogram

Dashboard

Overall score: 0%

1 -

Question 35 of 79



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	Urinary serotonin
	Lung function tests
	24 hour urinary 5HIAA
	Plasma chromogranin A
	Echocardiogram

Dashboard

Overall score: **0%**

1 -

□ Question 36 of 79



A 43 year old man has been referred to endocrinology clinic for blood pressure investigation and management. Over the past year the patient has had a persistently raised blood pressure between 170/100mmHg and 180/110mmHg. Despite starting the patient on ramipril 5mg once daily four weeks ago the patient's blood pressure on this visit remained raised at 164/93mmHg.

During the history taking part of the consultation the patient mentions that he has been troubled with headaches for the past year, and has noticed that his stool frequency has increased and his stools have become looser. He tells you that he's rather embarrassed to admit that he's been having flushing episodes, and feels that his clothes are much looser than they were 1 year ago.

On discussing his family history he mentions that both his mother and his father had to have cancerous lumps removed in their middle ages. His mother had a breast lump removed, and his father had some form of pancreatic mass removed.

On examination the patient is tall with a wide arm span. Examination of the cardiovascular system reveals only a minor tachycardia of 95bpm and a quiet systolic flow murmur not radiating to the carotids. Abdominal examination reveals no palpable masses, and examination of his lungs is completely normal.

The GP had previously arranged a 24h urinary catecholamine test; results are as follows:

Total urine catecholamines 210mcg/24hr. This is raised.

As a follow up to this test the GP had arranged a CT of the patient's abdomen and pelvis which is reported as normal apart from a few incidental simple renal cysts.

Urinalysis in clinic today shows:

Leucocytes	-
Blood	-
Glucose	+
Ketones	-

Which test is most likely to elucidate the cause of the patient's hypertension?

	Pentagastrin stimulation test
	24h urinary HIAA
	MRI renal angiography
	GH, IGF-1 and 'gut hormones'
	MIBG (metaiodobenzylguanidine) scan

Dashboard

Overall score: **0%**

1 -

□ Question 36 of 79



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Dashboard

Overall score: **0%**

1 -

Question 37 of 79



You are asked to review a 62 year-old Caucasian man who is an inpatient on the medical admissions unit. He is currently being treated for a left lower lobe community acquired pneumonia. You note consumed alcohol excessively prior to admission but has been abstinent for the last four days.

During this admission it has been noted that serial bloods glucose measurements have been elevated and subsequently a new diagnosis type two diabetes has been made. The admission consultant noted Cushingoid featured and requested an overnight low dose dexamethasone suppression test. The results are as follows:

8am Cortisol after 1mg dexamethasone at 11pm the previous day	438 nmol/L
Reference range for serum cortisol	170-540 nmol/L

What is most appropriate next step in the investigation of this gentleman?

	Serum ACTH measurement
	Midnight serum cortisol
	Inferior petrosal sinus sampling post CRH administration
	High dose dexamethasone suppression test
	MRI pituitary

Dashboard

Overall score: 0%

1 -

□ Question 37 of 79



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	High dose dexamethasone suppression test
	MRI pituitary

Dashboard

Overall score: **0%**

1 -

□ Question 38 of 79



A 22-year-old female, who is known to have type 1 diabetes mellitus, presents with weight loss, anorexia and fatigue for the last six months.

Her diabetes was well controlled with soluble insulin three times daily and long acting insulin in the evening but during the last six months she noticed that her insulin requirement has generally decreased and on three occasions she had hypoglycaemic attacks.

During the same time period she had lost approximately 7 Kg in weight and had generally lost her appetite. She had also been amenorrhoeic over the last three months.

On examination, she is thin (BMI 18), with a pulse rate of 70 beats per minute and a blood pressure of 110/70 mmHg with a postural drop.

Investigations reveal:

Serum sodium	125mmol/L
Serum potassium	5.3mmol/L
Serum urea	7.4mmol/L
Serum creatinine	100 mol/L
Serum glucose	7.5mmol/L
HbA1c	6.0%
Serum free T4	7.5 pmol/L
Serum TSH	5.5 pmol/L
Serum oestradiol	70 pmol/L (130-850)
Serum LH	2.5 mU/L (2-10)
Serum FSH	2.2 mU/L (2-10)
Serum prolactin	400 mU/L (50-450)

Serum calcium	2.9 mmol/l
Serum phosphate	0.8 mmol/l

What is the most appropriate investigation for this patient?

	Thyroid autoantibodies
	PTH concentration
	Short synacthen test
	Pregnancy test
	Random cortisol concentration

Dashboard

Overall score: 0%

1 -

□ Question 38 of 79



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During the same time period she had lost approximately 7 Kg in weight and had generally lost her appetite. She had also been amenorrhoeic over the last three months.

On examination, she is thin (BMI 18), with a pulse rate of 70 beats per minute and a blood pressure of 110/70 mmHg with a postural drop.

Investigations reveal:

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Serum potassium	5.3mmol/L
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Serum creatinine	100 mol/L
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Serum free T4	7.5 pmol/L
Serum TSH	5.5 pmol/L
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1 -

□ Question 39 of 79



A 52-year-old lady was seen in the general medicine clinic with aches and pains. The pains were present in her arms and legs, and not associated with her joints. They have been present for several months, and she was unable to identify any precipitating factors. She also felt that on occasion she felt generally weak and tired, though denied the presence of any specific weakness. Her past medical history comprised of epilepsy which was well controlled with phenytoin 500mg BD for several years, as well as hypertension and asthma. In addition to phenytoin 500mg BD she was prescribed ramipril 5mg OD, Clenil modulite 200mcg BD, salmeterol 100mcg BD and Elleste duo for the last six months. Upon specific questioning, she stated that she ate a nutritionally balanced diet, and that she had not suffered a previous fracture. Her mother was diagnosed with osteoporosis when she was 64-years-old, and she did not smoke. She drank 10 units of alcohol per week.

On examination, she was systemically well, with a blood pressure of 132/68 mmHg, heart rate 84, respiratory rate 16/min and body mass index of 23. Examination of her cardiovascular system revealed the presence of normal heart sounds and was unremarkable. Examination of the respiratory and gastrointestinal systems was likewise unremarkable except for the presence of gingival hypertrophy. Examination of the musculoskeletal system revealed the presence of Heberden's nodes but was also otherwise unremarkable with a full range of movement in all joints. Examination of the neurological system was normal with a power of 5/5 in all muscle groups and normal sensation, tone and coordination. Cranial nerve and fundoscopy examinations were unremarkable. Examination of the thyroid gland was unremarkable.

Investigations revealed the following results:

Bilirubin	22 μ mol/l
ALP	262 u/l
ALT	23 u/l
Albumin	42 g/l
Protein	76 g/l
Globulin	34 g/l
Adjusted calcium	2.06 mmol/l
Phosphate	0.78 mmol/l
Vitamin D level	pending result

Parathyroid hormone	88 (NR 11-54 pg/ml)
IgG	11.2 g/L (NR 7.0 18.0)
IgA	3.2 g/L(NR 0.8 4.0)
IgM	2.1 g/L (NR 0.4 2.5)

Urinary Bence Jones Protein: negative

What is the most likely underlying diagnosis?

<input type="radio"/>	Fibromyalgia
<input type="radio"/>	Paget's disease
<input type="radio"/>	Primary hyperparathyroidism
<input type="radio"/>	Osteoporosis
<input type="radio"/>	Osteomalacia

Dashboard

Overall score: **0%**

1 -

□ Question 39 of 79



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Urinary Bence Jones Protein: negative

What is the most likely underlying diagnosis?

	Fibromyalgia
	Paget's disease
	Primary hyperparathyroidism
	Osteoporosis
	Osteomalacia

Dashboard

Overall score: **0%**

1 -

Question 40 of 79

□ □

A 38-year-old woman is referred to the outpatient department by her GP with pain in her calves when walking 50 meters. She reports no other symptoms and has no other past medical history other than migraine. She is on no regular medication and her family history includes her mother having diabetes and her father dying of a heart attack aged 46. She currently smokes 35 cigarettes per day and drinks a glass of wine every evening. Her occupation is as a financial advisor.

Examination reveals tendon xanthomas affecting the extensor tendons of his fingers. On examining her face it is noticed she has xanthelasma around both eyes and corneal arcs.

Which of the follow is the most likely diagnosis?

	Tangier disease
	Homozygous familial hypercholesterolaemia
	Heterozygous familial hypercholesterolaemia
	Familial hypertriglyceridaemia
	Apo CII deficiency

Dashboard

Overall score: 0%

1 -

Question 40 of 79

A 38-year-old woman is referred to the outpatient department by her GP with pain in her calves when walking 50 meters. She reports no other symptoms and has no other past medical history other than migraine. She is on no regular medication and her family history includes her mother having diabetes and her father dying of a heart attack aged 46. She currently smokes 35 cigarettes per day and drinks a glass of wine every evening. Her occupation is as a financial advisor.

Examination reveals tendon xanthomas affecting the extensor tendons of his fingers. On examining her face it is noticed she has xanthelasma around both eyes and corneal arcs.

Which of the follow is the most likely diagnosis?

	Tangier disease
	Homozygous familial hypercholesterolaemia
	Heterozygous familial hypercholesterolaemia
	Familial hypertriglyceridaemia
	Apo CII deficiency

Dashboard

Overall score: **0%**

1 -

Question 41 of 79

□ □

A 42-year-old lady comes to see you in outpatients. Incidentally, you notice that her TSH was < 0.1 mU/l on a recent blood test requested by the GP. Her only past medical history is thyroid cancer which has been resected and her only medication levothyroxine 100mcg per day.

She is otherwise asymptomatic. What is the best course of action?

	Stop levothyroxine
	Continue at 100mcg per day
	Repeat thyroid function in 6 weeks
	Change to liothyronine equivalent dose
	Reduce the levothyroxine as she is over treated

Dashboard

Overall score: 0%

1 -

Question 41 of 79

□ □

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	Repeat thyroid function in 6 weeks
	Change to liothyronine equivalent dose
	Reduce the levothyroxine as she is over treated

Dashboard

Overall score: **0%**

1 -

□ Question 42 of 79

□ □

A 65-year-old Muslim man with type II diabetes on metformin (500mg three times a day) comes to your endocrine clinic. He is about to start fasting between sunrise and sunset for Ramadan. He will typically eat a light meal before sunrise (Suhoor) and a large meal at sunset (Iftar).

How would you advise this gentleman in respect to his metformin prior to the large meal at sunset?

	Change to a sulphonylurea
	Stop metformin
	Take 1.5g metformin before the large meal at sunset
	Take 500mg metformin before the large meal at sunset
	Take 1g metformin before the large meal at sunset

Dashboard

Overall score: 0%

1 -

Question 42 of 79

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	Stop metformin
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	Take 500mg metformin before the large meal at sunset
	Take 1g metformin before the large meal at sunset

Dashboard

Overall score: **0%**

1 -

□ Question 43 of 79



A 50-year-old gentleman presents to review in the endocrine clinic. He was normally taking metformin and gliclazide, but over the last six months has also been prescribed a GLP-1 mimetic. He was started on a GLP-1 mimetic because of poor diabetic control and concerns about starting insulin. He does not want to start insulin because he is a truck driver and worried about losing his driving license. He had previously tried the combination of metformin, gliclazide and pioglitazone, but this had also failed to control his HbA1c.

Over the last six months his HbA1c has reduced from 81mmol/ mol to 80mmol/ mol, and he has lost two kg in weight. What is the most appropriate action?

	Continue current treatment and review in one year
	Continue current treatment and review in six months
	Change to metformin, gliclazide and pioglitazone
	Offer to add on insulin
	Stop GLP-1 mimetic and offer insulin treatment

Dashboard

Overall score: 0%

1 -

□ Question 43 of 79



A 50-year-old gentleman presents to review in the endocrine clinic. He was normally taking metformin and gliclazide, but over the last six months has also been prescribed a GLP-1 mimetic. He was started on a GLP-1 mimetic because of poor diabetic control and concerns about starting insulin. He does not want to start insulin because he is a truck driver and worried about losing his driving license. He had previously tried the combination of metformin, gliclazide and pioglitazone, but this had also failed to control his HbA1c.

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	Continue current treatment and review in six months
	Change to metformin, gliclazide and pioglitazone
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	Stop GLP-1 mimetic and offer insulin treatment

Dashboard

Overall score: **0%**

1 -

□ Question 43 of 79

□ □

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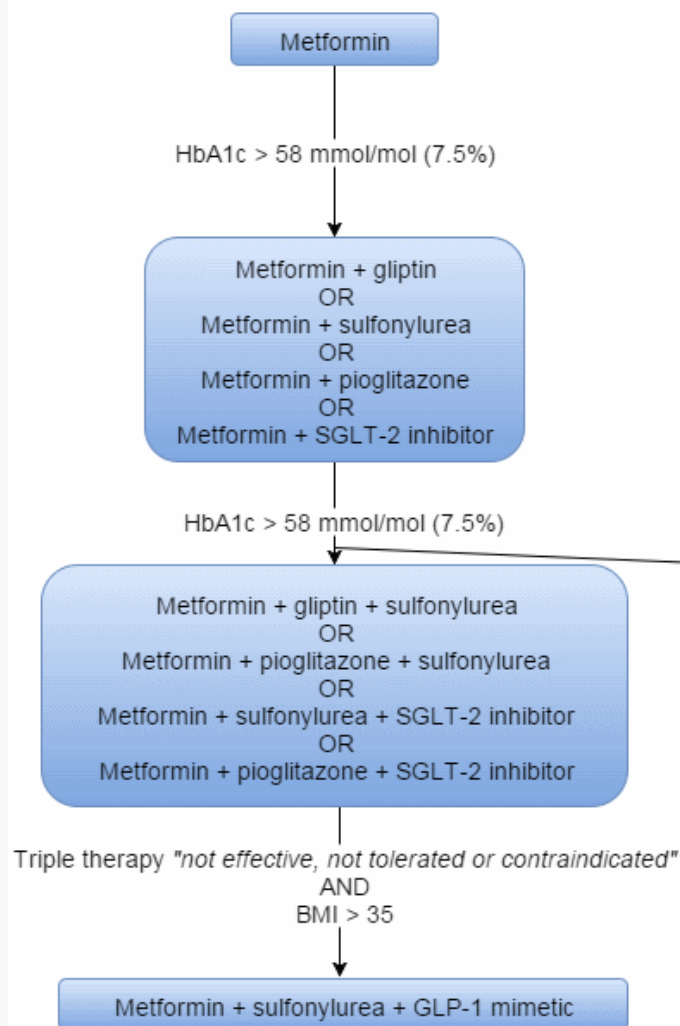
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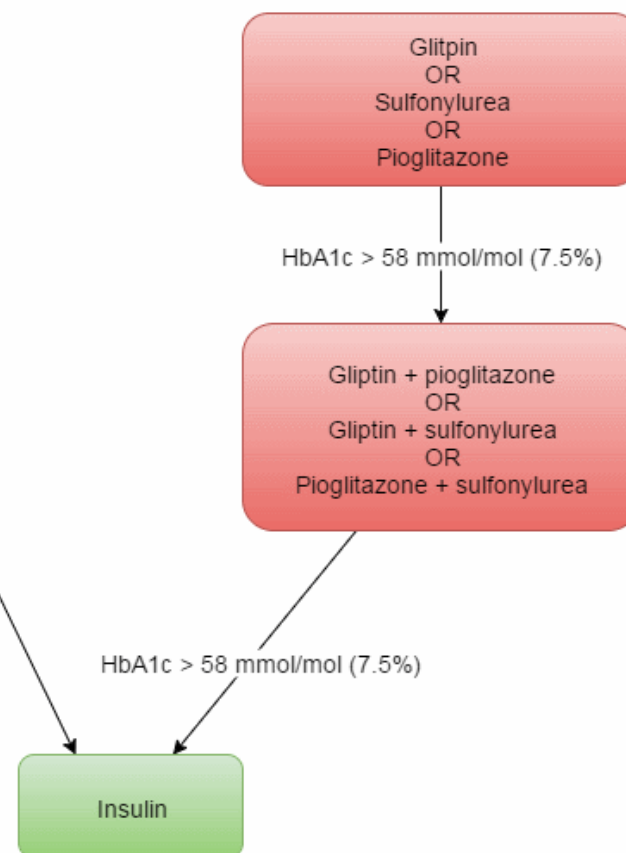
Dashboard

Overall score: **0%****1** -

Metformin



Metformin not tolerated or CI



Question 43 of 79

A 50-year-old gentleman presents over the last six months has poor diabetic control and is concerned about losing his pioglitazone, but this had also

Over the last six months his What is the most appropriate

<input type="radio"/>	Continue current treatment
<input type="radio"/>	Continue current treatment
<input type="radio"/>	Change to metformin, gliclazide and pioglitazone
<input type="radio"/>	Offer to add on insulin
<input checked="" type="radio"/>	Stop GLP-1 mimetic and offer insulin treatment

Dashboard

Overall score: 0%

1 -

Primary prevention

(10-year cardiovascular risk $\geq 10\%$ OR
most type 1 diabetics OR
CKD if eGFR $< 60\text{ml/min/m}^2$)



Atorvastatin 20mg od

(if non-HDL has not fallen by $\geq 40\%$ then
consider titrating up to 80mg)

Question 44 of 79



A 19 year-old man is referred by his GP to the outpatient department after having several episodes of collapse at college. He reports that during these episodes he feels tired and 'blacks out'. Afterwards, he feels shaky and weak. There is no tongue biting or incontinence during these episodes and the patient reports that he often feels dizzy after standing up too quickly from a chair. The only other symptoms he reports is a sore throat that has persisted for a few weeks and lethargy.

On examination of the patient's mouth and throat, there are some white plaques located at the back of the tongue and throat. His sitting blood pressure is 130/80 mmHg and his standing blood pressure is 95/70 mmHg. He is otherwise well.

Blood tests are performed and reveal:

Hb	13.9 g/dL
Platelets	$200 \times 10^9/l$
WBC	$6.2 \times 10^9/l$
Na ⁺	132 mmol/l
K ⁺	5.1 mmol/l
Urea	4.7 mmol/l
Creatinine	81 μ mol/l
Calcium	1.9 mmol/l
Random glucose	3.9 mmol/l

What is the most likely diagnosis?

<input type="checkbox"/>	Type II polyglandular autoimmune syndrome
<input type="checkbox"/>	Thymoma
<input type="checkbox"/>	Type 1 polyglandular autoimmune syndrome

	Type III polyglandular autoimmune syndrome
	HIV

Dashboard

Overall score: **0%**

1 -

□ Question 44 of 79



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Urea	4.7 mmol/l
Creatinine	81 μ mol/l
Calcium	1.9 mmol/l
Random glucose	3.9 mmol/l

What is the most likely diagnosis?

	Type II polyglandular autoimmune syndrome
	Thymoma
	Type 1 polyglandular autoimmune syndrome

	Type III polyglandular autoimmune syndrome
	HIV

Dashboard

Overall score: **0%**
1 -

□ Question 45 of 79



A 70-year-old woman with a history of type 2 diabetes mellitus and hypertension is reviewed in clinic. You can see from the records there is no evidence of diabetic retinopathy, chronic kidney disease or cardiovascular disease.

Her current medication is as follows:

- simvastatin 40mg on
- ramipril 10mg od
- amlodipine 5mg od
- metformin 1g bd

Recent blood results are shown below:

Na ⁺	142 mmol/l
K ⁺	4.4 mmol/l
Urea	7.2 mmol/l
Creatinine	86 µmol/l
HbA1c	45 mmol/mol (6.3%)

Urine dipstick shows no proteinuria. Her blood pressure today in clinic is 134/76 mmHg.

What is the most appropriate course of action?

	Add gliclazide
	Increase amlodipine
	Increase ramipril
	Add losartan

No changes to medication required

Dashboard

Overall score: **0%**

1 -

Question 45 of 79



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Dashboard

Overall score: **0%**

1 -

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What is the most appropriate course of action?

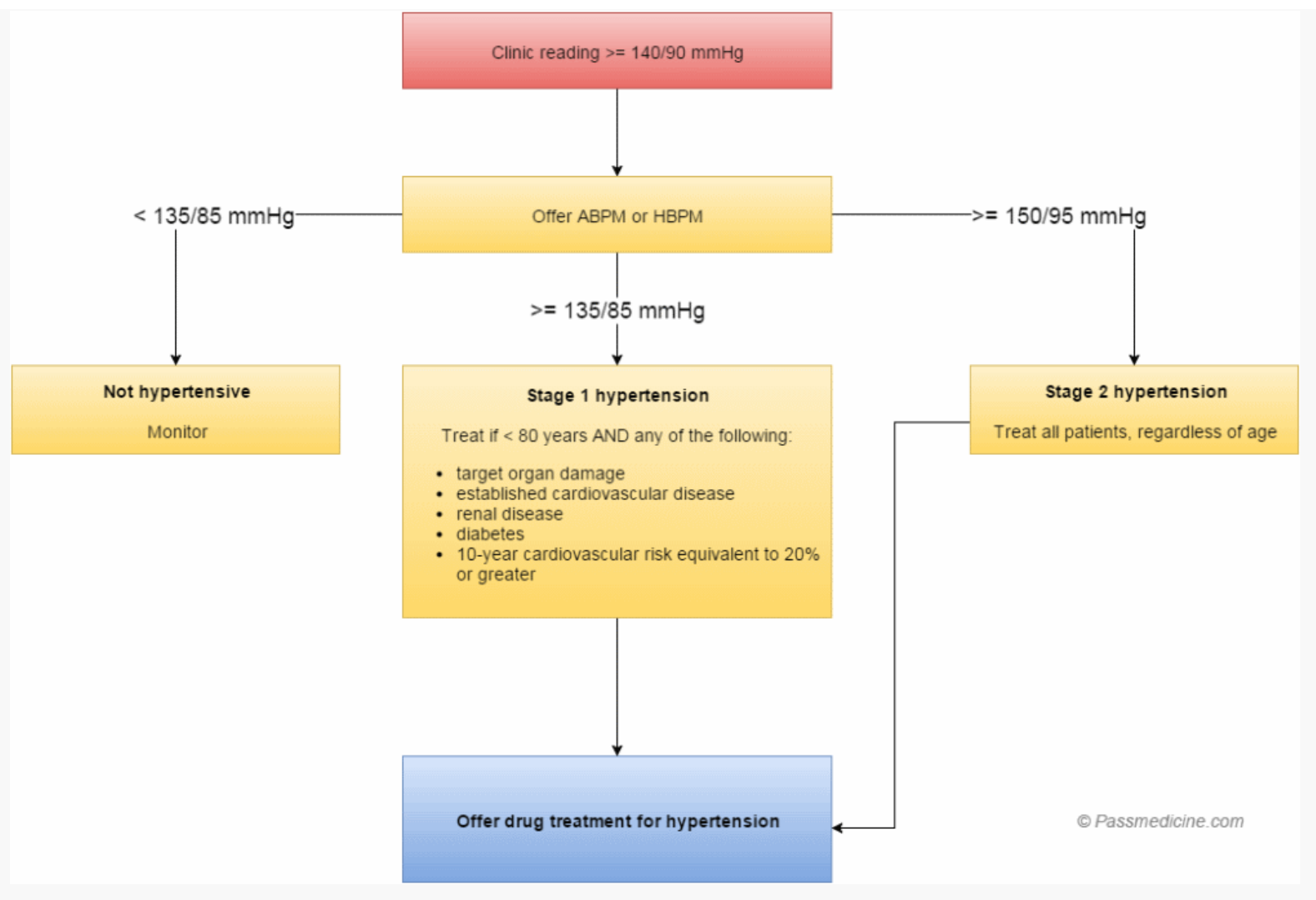
	Add gliclazide
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No changes to medication required

Dashboard

Overall score: **0%**

1 -



Question 45 of 79

□ □

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What is the most appropriate course of action?

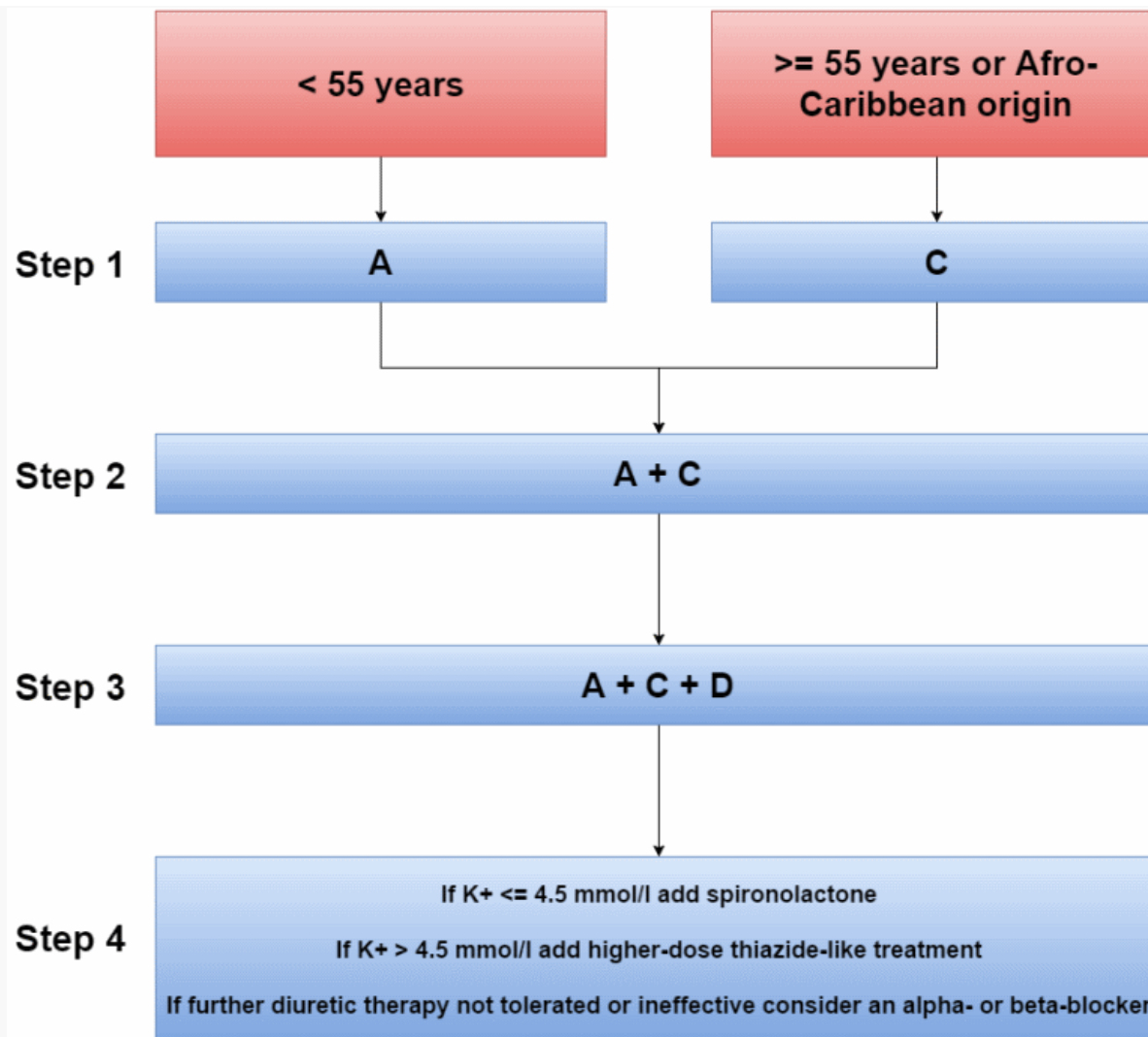
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	Increase amlodipine
	Increase ramipril
	Add losartan

No changes to medication required

Dashboard

Overall score: **0%**

1 -



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Key

A = ACE inhibitor

C = Calcium channel blocker

D = Thiazide Diuretic

Question 46 of 79



A 19-year-old woman presents to the emergency department drowsy and vomiting. She is accompanied by a friend who tells you she has been out drinking all day and has been vomiting for the last few hours.

Her speech is slurred and confused, she opens her eyes in response to her name and pushes you away in response to a painful stimulus. Heart rate is 100 beats per minute and regular, blood pressure is 100/60 mmHg, capillary glucose is 18 mmol/L, and a urine dip shows pH: 4, blood: trace, ketones: +++, protein: trace, nitrites: negative and leukocytes: negative.

Chest x-ray: Normal

Venous blood gas:

pH	7.27 (7.35-7.45)
Bicarbonate	10mmol/L (22-26)
Base excess	-10 (-2 to +2)
Sodium	135 mmol/L (137-144)
Potassium	2.9 mmol/L (3.5-4.9)
Chloride	99 mmol/L (95-107)

Serum Glucose: 21 mmol/L

What is the most important initial intervention?

	Fixed rate intravenous insulin infusion (FRIII)
	Intravenous calcium gluconate
	Intravenous fluids

	Sliding scale insulin
	Urgent CT head

Dashboard

Overall score: **0%**
1 -

Question 46 of 79



A 19-year-old woman presents to the emergency department drowsy and vomiting. She is accompanied by a friend who tells you she has been out drinking all day and has been vomiting for the last few hours.

Her speech is slurred and confused, she opens her eyes in response to her name and pushes you away in response to a painful stimulus. Heart rate is 100 beats per minute and regular, blood pressure is 100/60 mmHg, capillary glucose is 18 mmol/L, and a urine dip shows pH: 4, blood: trace, ketones: +++, protein: trace, nitrites: negative and leukocytes: negative.

Chest x-ray: Normal

Venous blood gas:

pH	7.27 (7.35-7.45)
Bicarbonate	10mmol/L (22-26)
Base excess	-10 (-2 to +2)
Sodium	135 mmol/L (137-144)
Potassium	2.9 mmol/L (3.5-4.9)
Chloride	99 mmol/L (95-107)

Serum Glucose: 21 mmol/L

What is the most important initial intervention?

	Fixed rate intravenous insulin infusion (FRIII)
	Intravenous calcium gluconate
	Intravenous fluids

	Sliding scale insulin
	Urgent CT head

Dashboard

Overall score: **0%**
1 -

Question 47 of 79



A 55-year-old man was seen in the Emergency Department after a fainting episode. He describes a history of fatigue and nausea. His past medical history includes type 2 diabetes mellitus and HIV infection and he admits that he has not been compliant with any medications, including his anti-retroviral therapy.

On examination, his pulse was 65 beats per minute and regular, blood pressure 90/62 mmHg and respiratory rate 26 breaths per minute.

Investigations:

Haemoglobin	14.0 g/dL (13.0-18.0)
White cell count	$4 \times 10^9/L$ (4-11)
Platelets	$150 \times 10^9/L$ (150-400)
Sodium	130 mmol/L (135-145)
Potassium	5.8 mmol/L (3.5-5.0)
Creatinine	80 $\mu\text{mol/L}$ (60-110)
Glucose	4.0 mmol/L (4.0-7.8)

What is the most appropriate next step management step?

	Salbutamol nebuliser
	Broad-spectrum antibiotics
	Sliding scale insulin infusion
	Intravenous hydrocortisone
	Restart anti-retroviral medications

Dashboard

Overall score: **0%**

1 -

Question 47 of 79



A 55-year-old man was seen in the Emergency Department after a fainting episode. He describes a history of fatigue and nausea. His past medical history includes type 2 diabetes mellitus and HIV infection and he admits that he has not been compliant with any medications, including his anti-retroviral therapy.

On examination, his pulse was 65 beats per minute and regular, blood pressure 90/62 mmHg and respiratory rate 26 breaths per minute.

Investigations:

Haemoglobin	14.0 g/dL (13.0-18.0)
White cell count	$4 \times 10^9/L$ (4-11)
Platelets	$150 \times 10^9/L$ (150-400)
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Potassium	5.8 mmol/L (3.5-5.0)
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Glucose	4.0 mmol/L (4.0-7.8)

What is the most appropriate next step management step?

	Salbutamol nebuliser
	Broad-spectrum antibiotics
	Sliding scale insulin infusion
	Intravenous hydrocortisone
	Restart anti-retroviral medications

Dashboard

Overall score: **0%**

1 -

□ Question 48 of 79



A 53 year old female presents with 48 hours of general malaise. 30 years ago, she underwent a resection of a pituitary mass and has since been complaint on desmopressin, levothyroxine and hydrocortisone, up until her last dose earlier in the morning. She has no other past medical history. Her husband reports the patient to have had reduced oral intake for the past 2 days while she has been unwell. She has no reported head injuries, rigors or pyrexia. On examination, her GCS is E3 V2 M5. She is cool peripherally and a temperature demonstrates 33.4 degrees under her tongue. Her spot blood glucose is 2.2 mmol/l. Her blood pressure is 86/50 HR 110 and sinus rhythm. Blood tests demonstrate Na 158, K 4.2. What is your first action(s)?

	Send thyroid function test
	Administer IV liothyronine
	Send random cortisol
	Administer IV hydrocortisone
	CT head, blood culture, urine dip, HbA1c

Dashboard

Overall score: 0%

1 -

□ Question 48 of 79



A 53 year old female presents with 48 hours of general malaise. 30 years ago, she underwent a resection of a pituitary mass and has since been complaint on desmopressin, levothyroxine and hydrocortisone, up until her last dose earlier in the morning. She has no other past medical history. Her husband reports the patient to have had reduced oral intake for the past 2 days while she has been unwell. She has no reported head injuries, rigors or pyrexia. On examination, her GCS is E3 V2 M5. She is cool peripherally and a temperature demonstrates 33.4 degrees under her tongue. Her spot blood glucose is 2.2 mmol/l. Her blood pressure is 86/50 HR 110 and sinus rhythm. Blood tests demonstrate Na 158, K 4.2. What is your first action(s)?

	Send thyroid function test
	Administer IV liothyronine
	Send random cortisol
	Administer IV hydrocortisone
	CT head, blood culture, urine dip, HbA1c

Dashboard

Overall score: **0%****1** -

□ Question 49 of 79



A 58 year-old man presents with a two month history of weight loss and a one week history of increasing confusion. His partner reports that his clothes are now loose on him and that he has started to forget things and that he has been unable to reach for objects off the top shelf at the supermarket over the last two months due to increasing weakness. Six weeks ago he had been treated for an islet cell carcinoma of the pancreas with chemotherapy and has no other past medical history.

Examination reveals an abbreviated mental test score of 5/10 and weakness in the shoulders and getting out of the chair. Heart sounds 1 and 2 are present with no added sounds, his chest is clear and the abdomen is soft and non-tender.

Observations reveal a blood pressure of 158/95 mmHg, a pulse rate of 90 beats per minute, a temperature of 37.5°C and a respiratory rate of 14 breaths per minute. Random blood glucose is 16.2 mmol/L.

Blood tests are performed and reveal:

Hb	14.2 g/l
Platelets	180 * 10 ⁹ /l
WBC	4.9 * 10 ⁹ /l
Na ⁺	150 mmol/l
K ⁺	2.6 mmol/l
Urea	5.2 mmol/l
Creatinine	100 µmol/l
Bilirubin	15 µmol/l
ALP	70 u/l
ALT	28 u/l
γGT	47 u/l
Albumin	48 g/l

What is the most likely diagnosis?

	Paraneoplastic encephalitis
	Cerebral metastases
	Post chemotherapy Cushing's syndrome
	Post chemotherapy hypothyroidism
	Ectopic ACTH secretion

Dashboard

Overall score: 0%

1 -

□ Question 49 of 79



A 58 year-old man presents with a two month history of weight loss and a one week history of increasing confusion. His partner reports that his clothes are now loose on him and that he has started to forget things and that he has been unable to reach for objects off the top shelf at the supermarket over the last two months due to increasing weakness. Six weeks ago he had been treated for an islet cell carcinoma of the pancreas with chemotherapy and has no other past medical history.

Examination reveals an abbreviated mental test score of 5/10 and weakness in the shoulders and getting out of the chair. Heart sounds 1 and 2 are present with no added sounds, his chest is clear and the abdomen is soft and non-tender.

Observations reveal a blood pressure of 158/95 mmHg, a pulse rate of 90 beats per minute, a temperature of 37.5°C and a respiratory rate of 14 breaths per minute. Random blood glucose is 16.2 mmol/L.

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Platelets	180 * 10 ⁹ /l
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ALP	70 u/l
ALT	28 u/l
γGT	47 u/l
Albumin	48 g/l

What is the most likely diagnosis?

	Paraneoplastic encephalitis
	Cerebral metastases
	Post chemotherapy Cushing's syndrome
	Post chemotherapy hypothyroidism
	Ectopic ACTH secretion

Dashboard

Overall score: **0%**
1 -

□ Question 50 of 79

□ □

A 20-year-old nurse with no past medical history presents following a collapse with a blood sugar 1.5 mmol/l . You phone her general practitioner and find out she has had 6 month history of episodes hypoglycemia. The cause has not been established and she is awaiting an outpatient endocrinology opinion. In hospital her bloods come back showing an insulin level 350 mIU/L(18-276) 1 hour after lunch. Her C-peptide level at this time is 3.50 ng/ml (0.51 to 2.72). Her TSH is 0.03 mIU/L . What test should be performed next?

	Urgent MRI pancreas
	Urgent ultrasound thyroid
	Urgent MRI head
	Urine or serum sulphonylurea levels
	Short Synacthen test

Dashboard

Overall score: 0%

1 -

□ Question 50 of 79

□ □

A 20-year-old nurse with no past medical history presents following a collapse with a blood sugar 1.5 mmol/l . You phone her general practitioner and find out she has had 6 month history of episodes hypoglycemia. The cause has not been established and she is awaiting an outpatient endocrinology opinion. In hospital her bloods come back showing an insulin level 350 mIU/L(18-276) 1 hour after lunch. Her C-peptide level at this time is 3.50 ng/ml (0.51 to 2.72). Her TSH is 0.03 mIU/L . What test should be performed next?

	Urgent MRI pancreas
	Urgent ultrasound thyroid
	Urgent MRI head
	Urine or serum sulphonylurea levels
	Short Synacthen test

Dashboard

Overall score: **0%****1** -

□ Question 51 of 79



A 26-year-old primigravida lady is brought to the hospital at 17 weeks gestation with worsening confusion. Her husband states that she has been vomiting profusely for the past 3 weeks. She has been unable to eat but she has managed to keep down small amounts of fluid.

Her past medication history is unremarkable and she takes no regular medications.

On examination, she is afebrile. Her pulse is 108bpm and her blood pressure is 103/68mmHg. She is alert but disorientated to time and place. Cranial nerve examination is remarkable for bilateral VIth nerve palsy and multi-directional nystagmus. Peripheral neurological examination reveals MRC grade 4/5 power in both lower limbs. Her lower limb jerks are absent and there is bilateral loss of distal vibration sense. Her plantar responses are downgoing.

A set of blood tests are requested:

Hb	117 g/l	Na ⁺	132 mmol/l
Platelets	362 * 10 ⁹ /l	K ⁺	2.8 mmol/l
WBC	12.3 * 10 ⁹ /l	Urea	8.9 mmol/l
Neuts	10.1 * 10 ⁹ /l	Creatinine	112 µmol/l
Lymphs	1.9 * 10 ⁹ /l	CRP	17 mg/l
Eosin	0.01 * 10 ⁹ /l	Glucose	3.1 mmol/l

What is the most appropriate treatment?

	Folic acid
	Niacin
	Vitamin B12
	Intravenous dextrose

Dashboard

Overall score: **0%**

1 -

□ Question 51 of 79



A 26-year-old primigravida lady is brought to the hospital at 17 weeks gestation with worsening confusion. Her husband states that she has been vomiting profusely for the past 3 weeks. She has been unable to eat but she has managed to keep down small amounts of fluid.

Her past medication history is unremarkable and she takes no regular medications.

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Lymphs	1.9 * 10 ⁹ /l	CRP	17 mg/l
Eosin	0.01 * 10 ⁹ /l	Glucose	3.1 mmol/l

What is the most appropriate treatment?

	Folic acid
	Niacin
	Vitamin B12
	Intravenous dextrose

Dashboard

Overall score: **0%**

1 -

□ Question 52 of 79



A 25-year-old woman is brought to the emergency department by ambulance after being found unwell by friends. Collateral history reported by the paramedics indicated that the patient had been unwell for 3 days with vomiting and diarrhoea. Her housemate said that the patient had been unable to eat since becoming unwell and that he did not think she had been taking her regular insulin during that time. The patient herself was too disorientated to give any history. The paramedics had found both novorapid and lantus insulin pen devices in the patients fridge.

General examination indicated a drowsy and dehydrated patient with generalised abdominal tenderness but no evidence of focal peritonism.

Please see below for selected investigation results.

Observations: blood pressure 86 / 57 mmHg; heart rate 127 beats per minute; respiratory rate 28 per minute; O₂ saturations 100 % (room air); Temperature 37.1 °C.

Fingerpick blood glucose	38.2 mmol / L
Fingerpick blood ketones	8.7 mmol / L
Urea	12.5 mmol / L
Creatinine	123 micromol / L
Sodium	148 mmol / L
Potassium	3.7 mmol / L
Haemoglobin	156 g / dL
White cell count	14.3 x 10 ⁹ / microlitre
Neutrophils	11.3 x 10 ⁹ / microlitre
Platelets	453 x 10 ⁹ / microlitre

Arterial blood gas (room air)

pH	7.05
----	------

PaCO ₂	15 mmHg (reference 32-43)
PaO ₂	99 mmHg (reference 70-100)
Bicarbonate	12.3 mmol / L (reference 20.0-26.0)
Chloride	111 mmol / L (reference 99-108)
Lactate	7.5 mmol / L

What is the appropriate strategy for intravenous insulin treatment in this patient?

	Variable rate insulin infusion without initial bolus, converting to subcutaneous insulin once acidosis resolved
	Fixed rate insulin infusion without initial bolus, converting to subcutaneous insulin once patient is eating and drinking normally
	Fixed rate insulin infusion following initial bolus, converting to subcutaneous insulin once patient is eating and drinking normally
	Variable rate insulin infusion with initial bolus, converting to subcutaneous insulin once acidosis resolved
	Variable rate insulin infusion without initial bolus, converting to subcutaneous insulin once ketonaemia resolved

Dashboard

Overall score: **0%**

1 -

□ Question 52 of 79



A 25-year-old woman is brought to the emergency department by ambulance after being found unwell by friends. Collateral history reported by the paramedics indicated that the patient had been unwell for 3 days with vomiting and diarrhoea. Her housemate said that the patient had been unable to eat since becoming unwell and that he did not think she had been taking her regular insulin during that time. The patient herself was too disorientated to give any history. The paramedics had found both novorapid and lantus insulin pen devices in the patients fridge.

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Please see below for selected investigation results.

Observations: blood pressure 86 / 57 mmHg; heart rate 127 beats per minute; respiratory rate 28 per minute; O₂ saturations 100 % (room air); Temperature 37.1 °C.

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Haemoglobin	156 g / dL
White cell count	14.3 x 10 ⁹ / microlitre
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Platelets	453 x 10 ⁹ / microlitre

Arterial blood gas (room air)

pH	7.05
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PaCO ₂	15 mmHg (reference 32-43)
PaO ₂	99 mmHg (reference 70-100)
Bicarbonate	12.3 mmol / L (reference 20.0-26.0)
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	Variable rate insulin infusion without initial bolus, converting to subcutaneous insulin once acidosis resolved
	Fixed rate insulin infusion without initial bolus, converting to subcutaneous insulin once patient is eating and drinking normally
	Fixed rate insulin infusion following initial bolus, converting to subcutaneous insulin once patient is eating and drinking normally
	Variable rate insulin infusion with initial bolus, converting to subcutaneous insulin once acidosis resolved
	Variable rate insulin infusion without initial bolus, converting to subcutaneous insulin once ketonaemia resolved

Dashboard

Overall score: **0%**

1 -

□ Question 53 of 79



A 54-year-old man with a history of type 2 diabetes is recovering on the surgical ward having suffered an episode of acute pancreatitis some 4 days earlier. Medication for glucose control includes metformin, dapagliflozin and liraglutide. On examination his blood pressure is 135/80 mmHg, pulse is 72 and regular. His body mass index is 35 kg/m². A recent HbA1c is 63 mmol/mol, renal function is reported as normal. Which of the following is the correct course of action with respect to his long term blood glucose lowering medication?

	Stop metformin
	Stop dapagliflozin
	Stop liraglutide
	Continue usual medication
	Stop metformin and liraglutide

Dashboard

Overall score: 0%

1 -

□ Question 53 of 79

□ □

A 54-year-old man with a history of type 2 diabetes is recovering on the surgical ward having suffered an episode of acute pancreatitis some 4 days earlier. Medication for glucose control includes metformin, dapagliflozin and liraglutide. On examination his blood pressure is 135/80 mmHg, pulse is 72 and regular. His body mass index is 35 kg/m². A recent HbA1c is 63 mmol/mol, renal function is reported as normal. Which of the following is the correct course of action with respect to his long term blood glucose lowering medication?

	Stop metformin
	Stop dapagliflozin
	Stop liraglutide
	Continue usual medication
	Stop metformin and liraglutide

Dashboard

Overall score: **0%****1** -

□ Question 53 of 79

□ □

A 54-year-old man with a history of type 2 diabetes is recovering on the surgical ward having suffered an episode of acute pancreatitis some 4 days earlier. Medication for glucose control includes metformin, dapagliflozin and liraglutide. On examination his blood pressure is 135/80 mmHg, pulse is 72 and regular. His body mass index is 35 kg/m². A recent HbA1c is 63 mmol/mol, renal function is reported as normal. Which of the following is the correct course of action with respect to his long term blood glucose lowering medication?

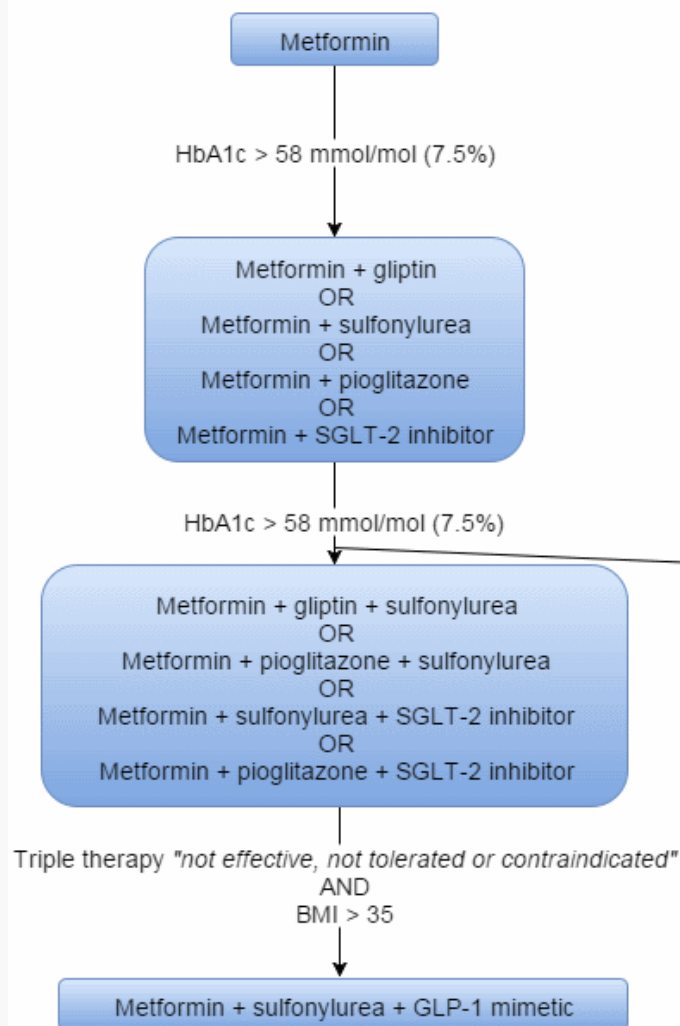
	Stop metformin
	Stop dapagliflozin
	Stop liraglutide
	Continue usual medication
	Stop metformin and liraglutide

Dashboard

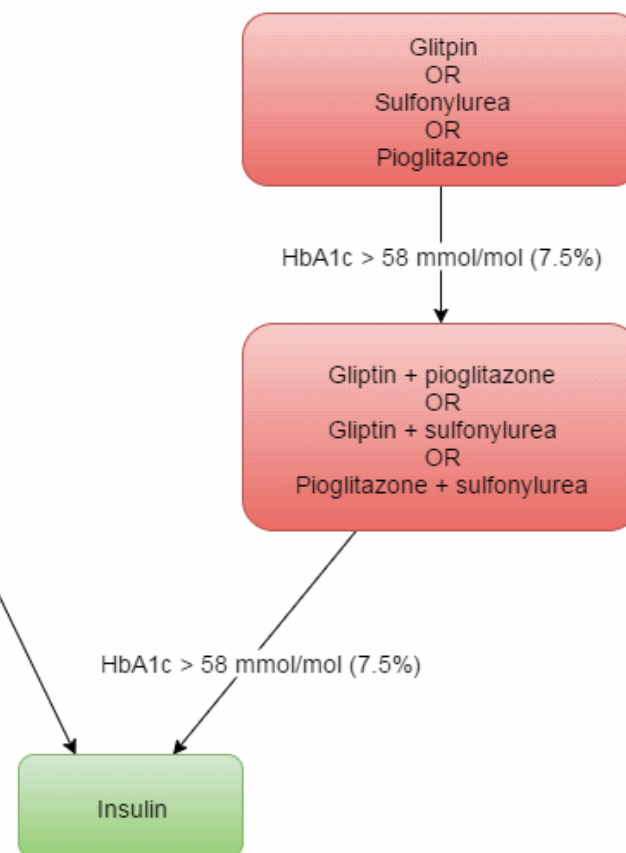
Overall score: 0%

1 -

Metformin



Metformin not tolerated or CI



Question 53 of 79

A 54-year-old man with a history of acute pancreatitis some 4 days ago. On examination his blood pressure is 160/90 mmHg, HbA1c is 63 mmol/mol, renal function is normal in respect to his long term blockage of the renal arteries.

<input type="checkbox"/>	Stop metformin
<input type="checkbox"/>	Stop dapagliflozin
<input checked="" type="checkbox"/>	Stop liraglutide
<input type="checkbox"/>	Continue usual medication
<input type="checkbox"/>	Stop metformin and liraglutide

Primary prevention

(10-year cardiovascular risk $\geq 10\%$ OR
most type 1 diabetics OR
CKD if eGFR $< 60\text{ml/min/m}^2$)



Atorvastatin 20mg od

(if non-HDL has not fallen by $\geq 40\%$ then
consider titrating up to 80mg)

Dashboard

Overall score: **0%**

1 -

Question 54 of 79

□ □

An 18-year-old man comes to the endocrinology clinic for review. He has been transferred from the paediatric clinic with a diagnosis of congenital hypoparathyroidism and is treated with vitamin D and calcium supplementation. He has had one episode of symptomatic renal stones over the past 3 years and his creatinine is elevated at 125 micromol/l.

Which of the following is the most appropriate target with respect to serum calcium?

	1.85 mmol/l
	2.10 mmol/l
	2.25 mmol/l
	2.60 mmol/l
	2.85 mmol/l

Dashboard

Overall score: 0%

1 -

□ Question 54 of 79

□ □

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Which of the following is the most appropriate target with respect to serum calcium?

	1.85 mmol/l
	2.10 mmol/l
	2.25 mmol/l
	2.60 mmol/l
	2.85 mmol/l

Dashboard

Overall score: **0%****1** -

Question 55 of 79



A 42-year-old patient presents for review. He has a past medical history of type 2 diabetes mellitus. He takes metformin only and has had good glycaemic control. He is an Afro-Caribbean chemistry teacher. He has a family history of early ischaemic heart disease. His blood pressure is found to be 148/90mmHg, higher than previous visits when it was 143/89mmHg. He is keen to start treatment to help prevent heart disease. What should be offered?

	ACE inhibitor only
	ACE inhibitor and calcium-channel blocker
	Calcium channel blocker only
	Angiotensin receptor antagonist
	Beta-blocker

Dashboard

Overall score: **0%**

1 -

Question 55 of 79

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	Calcium channel blocker only
	Angiotensin receptor antagonist
	Beta-blocker

Dashboard

Overall score: **0%**

1 -

□ Question 55 of 79

□ □

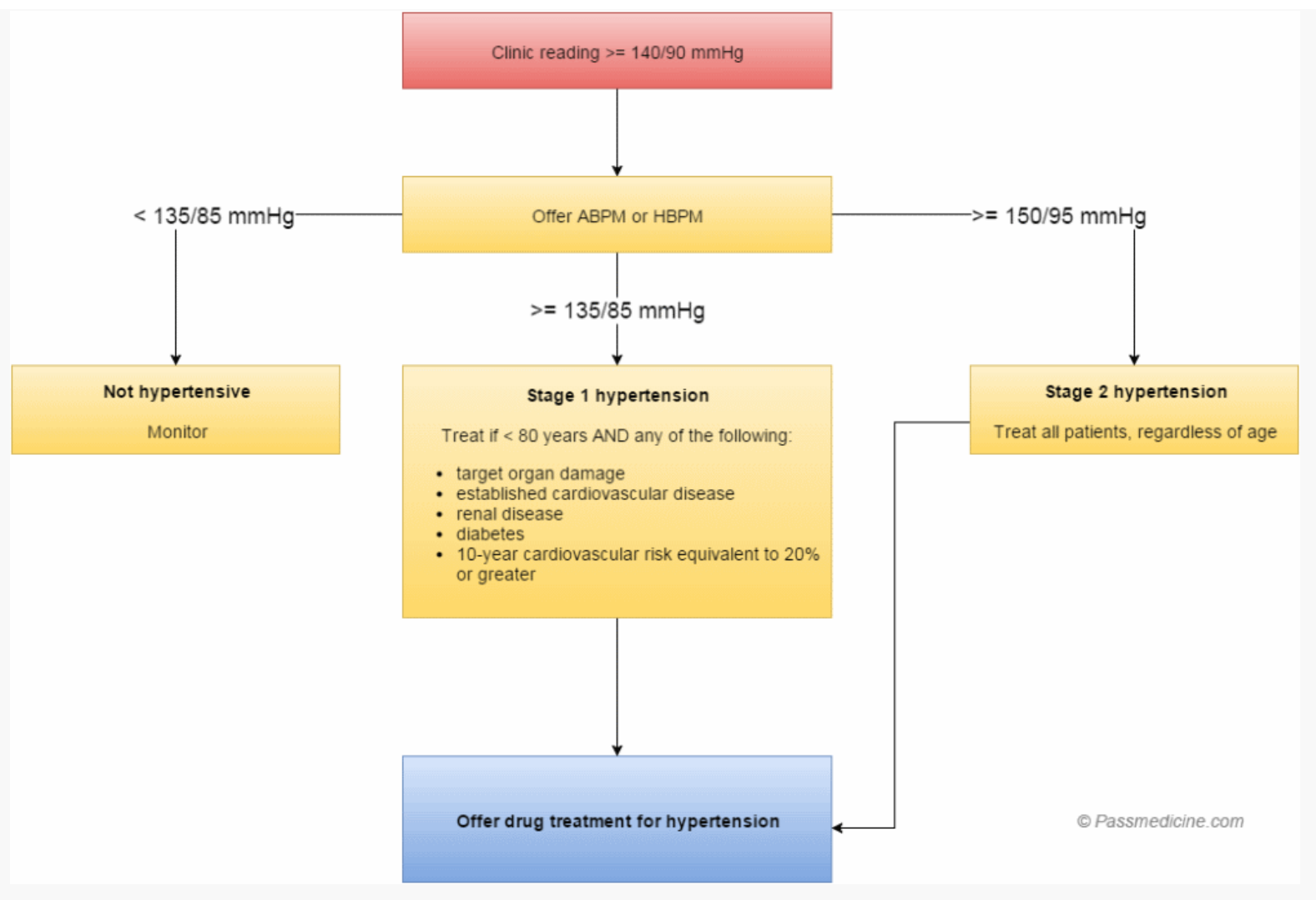
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	ACE inhibitor only
	ACE inhibitor and calcium-channel blocker
	Calcium channel blocker only
	Angiotensin receptor antagonist
	Beta-blocker

Dashboard

Overall score: 0%

1 -



□ Question 55 of 79

□ □

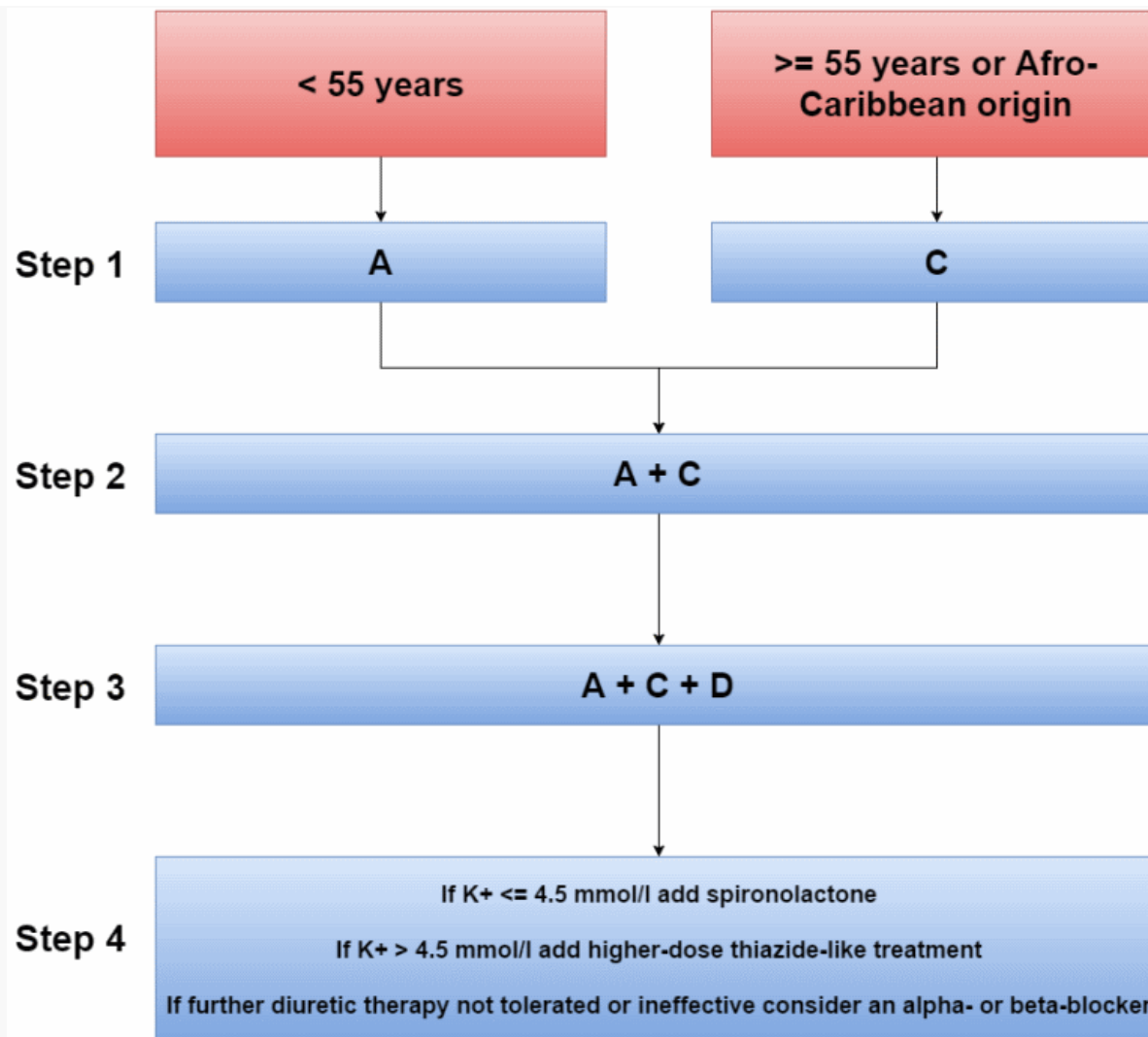
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	ACE inhibitor and calcium-channel blocker
	Calcium channel blocker only
	Angiotensin receptor antagonist
	Beta-blocker

Dashboard

Overall score: 0%

1 -



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Key

A = ACE inhibitor

C = Calcium channel blocker

D = Thiazide Diuretic

Question 56 of 79



A 66-year-old gentleman is reviewed in the General Medical Clinic with a 4-week history of polyuria, polydipsia, and generalised muscle weakness. He denies weight loss but does describe the presence of deep aching pains in his arms, legs, and lower back.

His past medical history is remarkable for hypertension, treated with amlodipine 5mg once daily and ramipril 7.5mg once daily. He also tells you that he has an 'antibody disorder' that requires no specific treatment but necessitates yearly follow-up at the Haematology Clinic.

Examination reveals a well-looking gentleman. His pulse is 74 bpm and his blood pressure is 132/63mmHg. There is no conjunctival pallor and his chest is clear to auscultation. His abdomen is soft and non-tender.

A series of investigations are requested:

Hb	132 g/l	Na ⁺	136 mmol/l	Bilirubin	17 µmol/l
Platelets	278 * 10 ⁹ /l	K ⁺	2.9 mmol/l	ALP	172 u/l
WBC	6.5 * 10 ⁹ /l	Cl ⁻	115 mmol/l	ALT	35 u/l
Neuts	3.8 * 10 ⁹ /l	Urea	5.2 mmol/l	γGT	39 u/l
Lymphs	1.8 * 10 ⁹ /l	Creatinine	87 µmol/l	Total Protein	92 g/l
Eosin	0.01 * 10 ⁹ /l			Albumin	40 g/l

Calcium	2.24 mmol/l
Adj. Calcium	2.24 mmol/l
Phosphate	0.38 mmol/l
Bicarbonate	18 mmol/l
Fasting glucose	4.9 mmol/l

Urine dip	Glucose ++ Protein ++
-----------	-----------------------

Sodium nitroprusside test	Positive

What is the most likely diagnosis?

	Multiple myeloma
	Fanconi syndrome
	Diabetes mellitus
	Cystinuria
	Pseudohypoaldosteronism

Dashboard

Overall score: **0%**

1 -

Question 56 of 79



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Lymphs	1.8 * 10 ⁹ /l	Creatinine	87 µmol/l	Total Protein	92 g/l
Eosin	0.01 * 10 ⁹ /l			Albumin	40 g/l

Calcium	2.24 mmol/l
Adj. Calcium	2.24 mmol/l
Phosphate	0.38 mmol/l
Bicarbonate	18 mmol/l
Fasting glucose	4.9 mmol/l

Urine dip	Glucose ++ Protein ++
-----------	-----------------------

Sodium nitroprusside test	Positive

What is the most likely diagnosis?

	Multiple myeloma
	Fanconi syndrome
	Diabetes mellitus
	Cystinuria
	Pseudohypoaldosteronism

Dashboard

Overall score: **0%**
1 -

□ Question 57 of 79



A 29-year-old woman comes to the clinic with feelings of anxiety, palpitations and a resting tremor present over the past 2 weeks. She also has symptoms of a flu-like illness and pain over her anterior neck. On examination, you reveal tenderness over the thyroid. Her blood pressure is 115/88 mmHg, she has a fine tremor at rest, sweaty palms and a tachycardia of 88 beats per minute. TSH is <0.05 U/ml.

Which of the following is the most appropriate intervention?

	Thyroxine
	Carbimazole
	Propylthiouracil
	Carbimazole and thyroxine
	Propranolol

Dashboard

Overall score: 0%

1 -

Question 57 of 79



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Which of the following is the most appropriate intervention?

	Thyroxine
	Carbimazole
	Propylthiouracil
	Carbimazole and thyroxine
	Propranolol

Dashboard

Overall score: **0%**

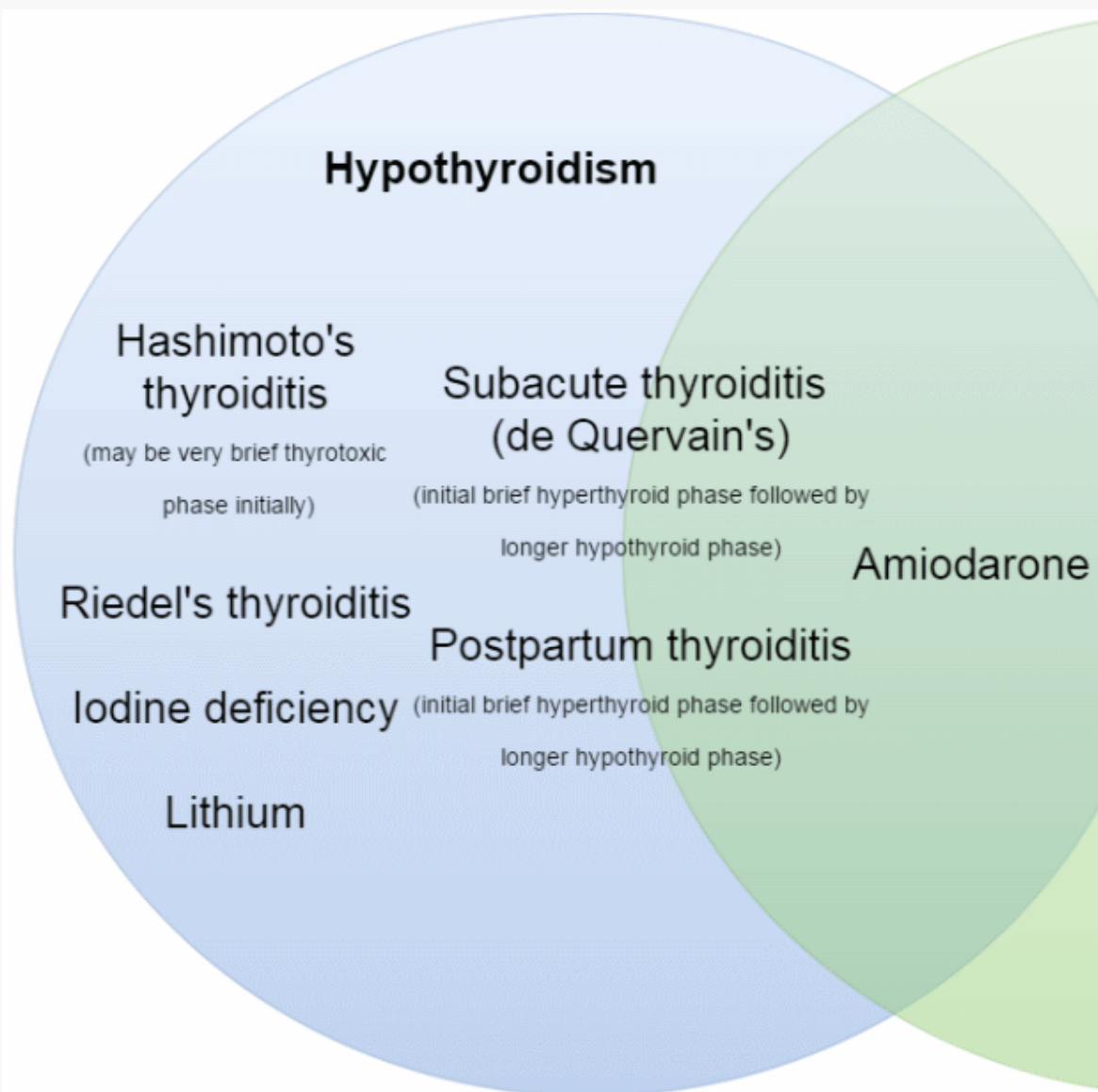
1 -

Question 57 of 79

A 29-year-old woman comes to you 2 weeks. She also has symptoms of thyroid tenderness over the thyroid. Her heart rate is tachycardia of 88 beats per minute.

Which of the following is the most appropriate treatment?

Thyroxine
Carbimazole
Propylthiouracil
Carbimazole and thyroxine
Propranolol



Dashboard

Overall score: **0%**

1 -

Question 58 of 79

A 22-year-old woman with a history of partial Kallmann syndrome comes to the fertility clinic for review. She got married some 6 months earlier and wants to start a family. She has normal external genitalia and sparse pubic and axillary hair and has a normal body mass index of 23kg/m². Which of the following is the most appropriate intervention?

<input type="checkbox"/>	Clomiphene
<input type="checkbox"/>	HCG and FSH then IVF
<input type="checkbox"/>	Metformin
<input type="checkbox"/>	Oestrogen
<input type="checkbox"/>	Referral for adoption

Dashboard

Overall score: **0%**

1 -

□ Question 58 of 79

□ □

A 22-year-old woman with a history of partial Kallmann syndrome comes to the fertility clinic for review. She got married some 6 months earlier and wants to start a family. She has normal external genitalia and sparse pubic and axillary hair and has a normal body mass index of 23kg/m². Which of the following is the most appropriate intervention?

	Clomiphene
	HCG and FSH then IVF
	Metformin
	Oestrogen
	Referral for adoption

Dashboard

Overall score: **0%****1** -

Question 59 of 79



A 71-year-old man presents to the emergency department having collapsed at home. On admission, he is confused and his daughter, who accompanied him to the emergency department states that she found him on the floor of the bathroom. There had not been any urinary incontinence or signs that he had bitten his tongue. He had been feeling hot and complaining of pain on urinating several days before the collapse. His past medical history includes rheumatoid arthritis, for which he takes long-term oral steroids. He is diagnosed in the emergency department as having urosepsis and is commenced on intravenous fluids and antibiotics.

What is the most appropriate other treatment for this patient?

	IV hydrocortisone
	IV hydrocortisone and fludrocortisone
	Oral prednisolone and fludrocortisone
	IV methylprednisolone and fludrocortisone
	Oral prednisolone

Dashboard

Overall score: 0%

1 -

Question 59 of 79

□ □

A 71-year-old man presents to the emergency department having collapsed at home. On admission, he is confused and his daughter, who accompanied him to the emergency department states that she found him on the floor of the bathroom. There had not been any urinary incontinence or signs that he had bitten his tongue. He had been feeling hot and complaining of pain on urinating several days before the collapse. His past medical history includes rheumatoid arthritis, for which he takes long-term oral steroids. He is diagnosed in the emergency department as having urosepsis and is commenced on intravenous fluids and antibiotics.

What is the most appropriate other treatment for this patient?

	IV hydrocortisone
	IV hydrocortisone and fludrocortisone
	Oral prednisolone and fludrocortisone
	IV methylprednisolone and fludrocortisone
	Oral prednisolone

Dashboard

Overall score: **0%**

1 -

□ Question 60 of 79



A 28-year-old woman presents with flu-like symptoms, palpitations and pain over the anterior neck over the past 2-3 weeks. She has also suffered rapid weight loss and feels increasingly anxious that there may be something seriously wrong with her. Her thyroid-stimulating hormone has been measured at <0.05 IU by her GP. On examination her blood pressure is 128/82 mmHg, her pulse is 95 beats per minute and regular, and she has a fine tremor. There is mild tenderness over the anterior neck. Body mass index is 22 kg/m^2

Which of the following would you also expect to find?

	Erythema nodosum
	Exophthalmos
	Multiple small thyroid nodules on ultrasound scan
	Positive anti-thyroid antibodies
	Reduced uptake on thyroid scintigraphy

Dashboard

Overall score: 0%

1 -

□ Question 60 of 79



A 28-year-old woman presents with flu-like symptoms, palpitations and pain over the anterior neck over the past 2-3 weeks. She has also suffered rapid weight loss and feels increasingly anxious that there may be something seriously wrong with her. Her thyroid-stimulating hormone has been measured at <0.05 IU by her GP. On examination her blood pressure is 128/82 mmHg, her pulse is 95 beats per minute and regular, and she has a fine tremor. There is mild tenderness over the anterior neck. Body mass index is 22 kg/m^2

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	Exophthalmos
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	Positive anti-thyroid antibodies
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Dashboard

Overall score: **0%**

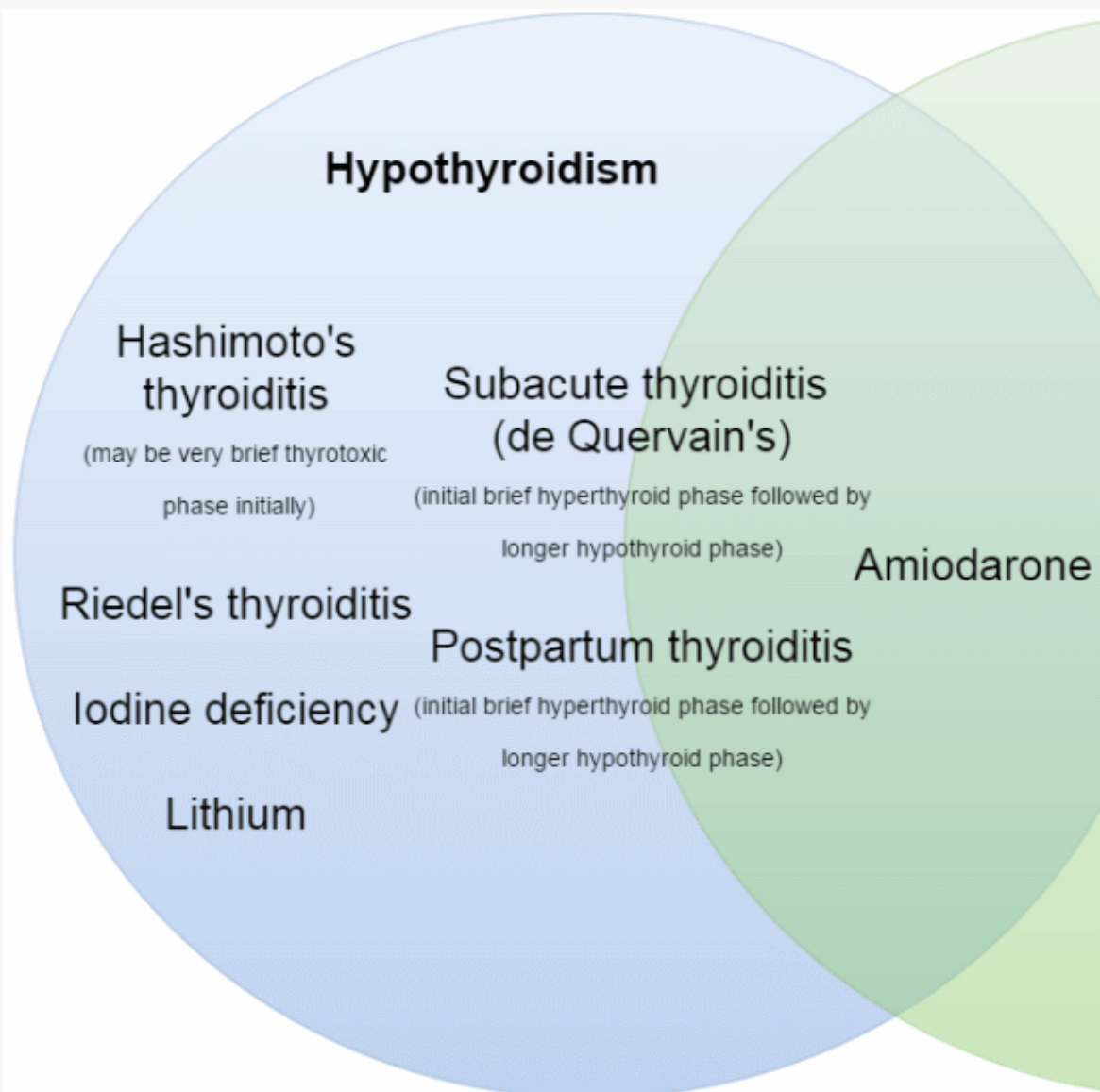
1 -

Question 60 of 79

A 28-year-old woman presents with symptoms of thyroid dysfunction over the past few weeks. She has also suffered from hypertension. Her thyroid gland is enlarged and tender to palpation. Her blood pressure is 128/82 mmHg, heart rate is 98 bpm, and she has a mild fever. There is tenderness over the anterior aspect of the thyroid gland.

Which of the following would be most likely to cause this presentation?

<input type="checkbox"/>	Erythema nodosum
<input type="checkbox"/>	Exophthalmos
<input type="checkbox"/>	Multiple small thyroid nodules
<input type="checkbox"/>	Positive anti-thyroid peroxidase antibodies
<input type="checkbox"/>	Reduced uptake on thyroid scintigraphy



Dashboard

Overall score: **0%**

1 -

Question 61 of 79



A 65-year-old gentleman presents with a 3 week history of general malaise, decreased oral intake and drowsiness. He has a past medical history of ischaemic heart disease, type 2 diabetes mellitus and gastritis. He lives alone with no carers and normally mobilises independently. A concerned neighbour went in to check on him after he was not seen for a few days. On examination his mouth is dry with reduced skin turgor. Heart sounds are normal, chest is clear, abdominal palpation reveals lower abdominal tenderness. ECG shows sinus tachycardia. Urine dip shows ketones +, glucose +++.

Blood tests show:

Hb	140 g/l	Na ⁺	150 mmol/l
Platelets	525 * 10 ⁹ /l	K ⁺	4.2 mmol/l
WBC	14 * 10 ⁹ /l	Urea	13 mmol/l
Neuts	10 * 10 ⁹ /l	Creatinine	160 µmol/l
Lymphs	2 * 10 ⁹ /l	CRP	56 mg/l
Eosin	0.5 * 10 ⁹ /l		

Venous blood gas shows no signs of acidosis. Formal blood glucose is phoned back as 40 mmol/L.

What is the most important initial treatment?

	Intravenous insulin
	Low molecular weight heparin
	Antibiotics
	Subcutaneous insulin
	Intravenous fluids

Dashboard

Overall score: **0%**

1 -

Question 61 of 79



A 65-year-old gentleman presents with a 3 week history of general malaise, decreased oral intake and drowsiness. He has a past medical history of ischaemic heart disease, type 2 diabetes mellitus and gastritis. He lives alone with no carers and normally mobilises independently. A concerned neighbour went in to check on him after he was not seen for a few days. On examination his mouth is dry with reduced skin turgor. Heart sounds are normal, chest is clear, abdominal palpation reveals lower abdominal tenderness. ECG shows sinus tachycardia. Urine dip shows ketones +, glucose +++.

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Neuts	10 * 10 ⁹ /l	Creatinine	160 µmol/l
Lymphs	2 * 10 ⁹ /l	CRP	56 mg/l
Eosin	0.5 * 10 ⁹ /l		

Venous blood gas shows no signs of acidosis. Formal blood glucose is phoned back as 40 mmol/L.

What is the most important initial treatment?

	Intravenous insulin
	Low molecular weight heparin
	Antibiotics
	Subcutaneous insulin
	Intravenous fluids

Dashboard

Overall score: **0%**

1 -

Question 62 of 79



You are seeing a 58-year-old man in clinic who has been referred by his GP with resistant hypertension despite treatment with ramipril, amlodipine, indapamide and bisoprolol. He looks comfortable at rest.

Observations are as follows: temperature 36.5°C, blood pressure 182/125 mmHg, heart rate 88/min, respiratory rate 16/min, saturations 97% on air

Investigations are as follows:

Na ⁺	148 mmol/l
K ⁺	2.9 mmol/l
Urea	6.5 mmol/l
Creatinine	92 µmol/l

Renin	Low
Aldosterone (supine)	High
Aldosterone (prolonged standing)	Increase from supine levels

Blood gases:

PaO ₂	11.2 kPa
PaCO ₂	5.2 kPa
pH	7.49
HCO ₃ ⁻	32 mmol/l
BE	+4

What is the single most likely diagnosis?

	Adrenal hyperplasia
	Conn's adenoma
	Malignant hypertension
	Phaeochromocytoma
	Renal artery stenosis

Dashboard

Overall score: **0%**

1 -

Question 62 of 79



You are seeing a 58-year-old man in clinic who has been referred by his GP with resistant hypertension despite treatment with ramipril, amlodipine, indapamide and bisoprolol. He looks comfortable at rest.

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Overall score: **0%**
1 -

□ Question 62 of 79



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Aldosterone (prolonged standing)	Increase from supine levels

Blood gases:

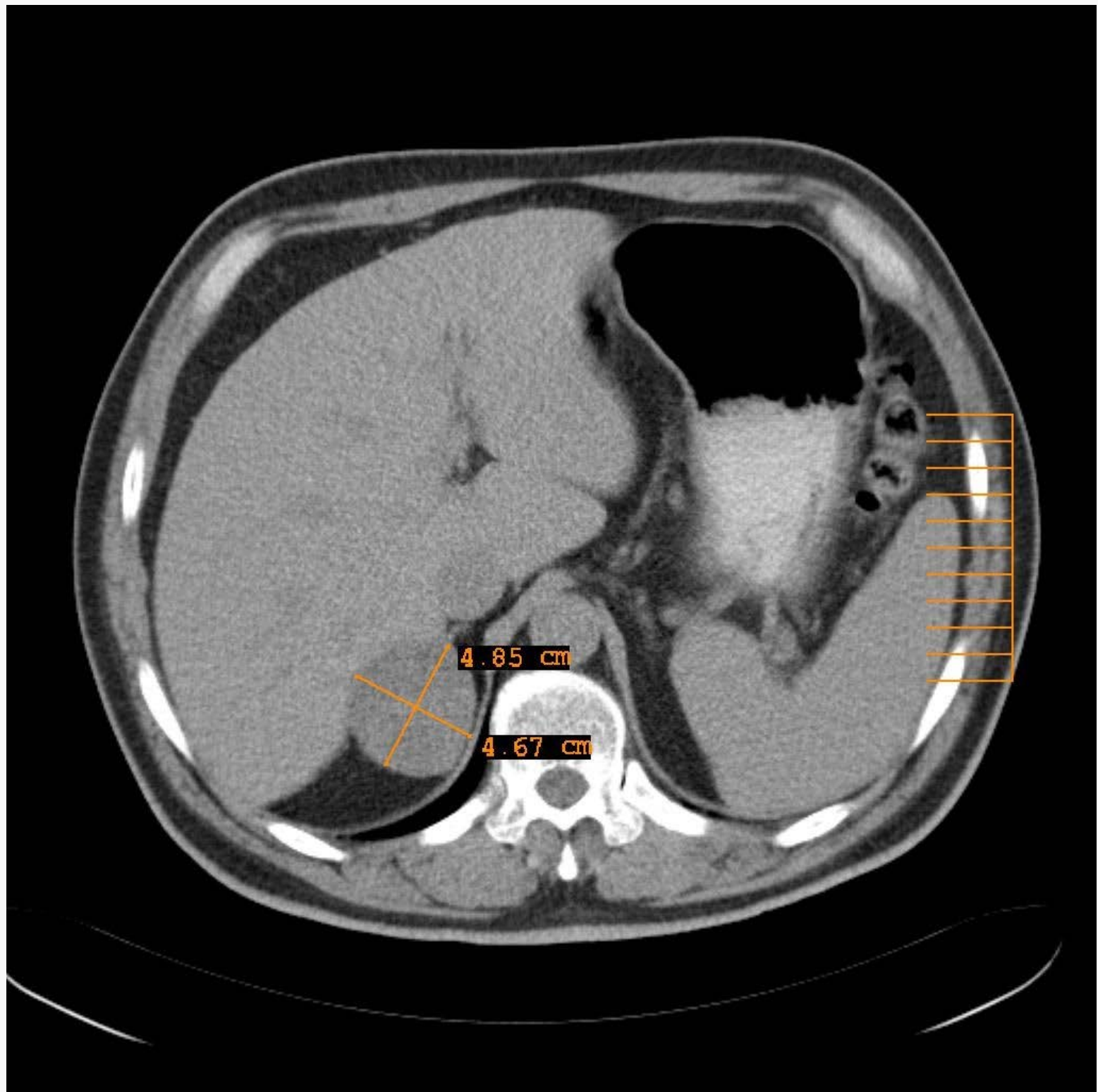
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PaCO ₂	5.2kPa
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BE	+4

What is the single most likely diagnosis?

	Adrenal hyperplasia
	Conn's adenoma
	Malignant hypertension
	Phaeochromocytoma
	Renal artery stenosis

Dashboard

Overall score: **0%**
1 -



Question 63 of 79



A 72-year-old male was admitted drowsy and confused. His family describe a 4-day history of shortness of breath and a productive cough. His past medical history includes type 2 diabetes mellitus, hypertension and hypercholesterolaemia. He usually takes metformin 500 mg three times daily, gliclazide 80 mg twice daily, amlodipine 5 mg daily and simvastatin 40 mg nightly. On examination he is confused with dry mucous membranes, blood pressure of 100/50 mmHg, a pulse of 110/min, a temperature of 37.6 °C and a respiratory rate of 20/min. Course crepitations were found at the right base and his pulse was thready with a capillary refill of 3 seconds; jugular venous pressure was not visible. Capillary blood glucose was found to be 11.

A venous blood sample is taken:

Hb	129 g/l	Na ⁺	161 mmol/l
Platelets	204 * 10 ⁹ /l	K ⁺	4.9 mmol/l
WBC	13.1 * 10 ⁹ /l	Urea	15.2 mmol/l
Neuts	11.9 * 10 ⁹ /l	Creatinine	97 µmol/l
Glucose	56 mmol/l	eGFR	62 mg/l
Ketones	1.9 mmol/l	HbA1c	75 mmol/mol
pH	7.35	HCO ₃	20 mmol/mol

What treatment would you initiate first?

<input type="checkbox"/>	0.9% normal saline
<input type="checkbox"/>	0.45 % normal saline
<input type="checkbox"/>	Hartmann's solution
<input type="checkbox"/>	Intravenous insulin
<input type="checkbox"/>	5% dextrose

Dashboard

Overall score: **0%**

1 -

Question 63 of 79



A 72-year-old male was admitted drowsy and confused. His family describe a 4-day history of shortness of breath and a productive cough. His past medical history includes type 2 diabetes mellitus, hypertension and hypercholesterolaemia. He usually takes metformin 500 mg three times daily, gliclazide 80 mg twice daily, amlodipine 5 mg daily and simvastatin 40 mg nightly. On examination he is confused with dry mucous membranes, blood pressure of 100/50 mmHg, a pulse of 110/min, a temperature of 37.6 °C and a respiratory rate of 20/min. Course crepitations were found at the right base and his pulse was thready with a capillary refill of 3 seconds; jugular venous pressure was not visible. Capillary blood glucose was found to be 11.

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<input type="checkbox"/>	Intravenous insulin
<input type="checkbox"/>	5% dextrose

Dashboard

Overall score: **0%**

1 -

□ Question 64 of 79



An elderly male presents with a 2 week history of breathlessness. His past medical history includes diet-controlled type 2 diabetes, ischaemic heart disease, hypothyroidism and depression. His medication list includes levothyroxine, aspirin, simvastatin, ramipril, bisoprolol and citalopram. Observations on presentation to Emergency Department are as follows: respiratory rate 26/min, saturations 94% (on 4 litres oxygen via Venturi), heart rate 80 beats per minute, blood pressure 156/82 mmHg. Auscultation demonstrates crackles at the left base with no wheeze. The abdomen is soft and non-tender. There is no oedema peripherally.

Blood results on admission are provided below:

Hb	134 g/l
Platelets	$172 \times 10^9/l$
WBC	$13.3 \times 10^9/l$
Na ⁺	128 mmol/l
K ⁺	5.1 mmol/l
Urea	13 mmol/l
Creatinine	178 μ mol/l
Serum osmolality	220 mosm/kg
Urinary sodium	50 mEq/l

What is the most likely cause of hyponatraemia?

	Hypothyroidism
	Chronic kidney disease
	Addison's disease
	Salt-losing nephropathy

	Syndrome of inappropriate antidiuretic hormone (SIADH)

Dashboard

Overall score: **0%**
1 -

Question 64 of 79



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	Hypothyroidism
	Chronic kidney disease
	Addison's disease
	Salt-losing nephropathy

Syndrome of inappropriate antidiuretic hormone (SIADH)

Dashboard

Overall score: **0%**

1 -

Question 65 of 79



A 37 year old female presents with 4 days of generally unwell and a recent dysuria. Her urine is foul smelling and dark. She is a known type 1 diabetic with a long standing subcutaneous insulin regime. Her pH on admission was 7.24, bicarbonate 8 mmol/l and blood glucose 32 mmol/l. Urinary dip leucocytes 2+, nitrites 2+ and 4+ ketones. She was started on treatment for diabetic ketoacidosis with intravenous fluids and fixed rate insulin. She also has intravenous antibiotics for a urinary source of sepsis. You are asked to review her blood sugars at 4 hours after treatment was initiated. What should be the aim in managing hyperglycaemia in a diabetic ketoacidosis patient?

<input type="checkbox"/>	Reduce blood glucose to under 14 mmol/l as quickly as possible
<input type="checkbox"/>	Reduce blood glucose by 3mmol/l per hour
<input type="checkbox"/>	Reduce blood glucose by 6 mmol/l per hour
<input type="checkbox"/>	Aim blood glucose above 18 mmol/l
<input type="checkbox"/>	Blood glucose does not require monitoring if insulin infusion is running

Dashboard

Overall score: 0%

1 -

Question 65 of 79

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	Reduce blood glucose by 6 mmol/l per hour
	Aim blood glucose above 18 mmol/l
	Blood glucose does not require monitoring if insulin infusion is running

Dashboard

Overall score: **0%**

1 -

Question 66 of 79



A 62 year old male, recently emigrated from India, presents with 5 day history of feeling generally unwell. His niece, who has accompanied him to hospital, denies a history of recent productive cough, diarrhoea or vomiting or dysuria. Her uncle had been gradually increasingly malaised over the past 5 days and not eating and drinking well. He has no known past medical history. On examination, he has dry mucous membranes and cool peripheries, his JVP is +1cm above the angle of Louis. Heart sounds, chest and abdomen are unremarkable. Urine dip and chest radiograph are awaited. His blood tests are as follows:

WBC	16 * 10 ⁹ /l
Neutrophils	14.8 * 10 ⁹ /l

Na ⁺	152 mmol/l
K ⁺	3.7 mmol/l
Urea	22 mmol/l
Creatinine	208 µmol/l
CRP	38 mg/l
Glucose	38 mmol/l
Ketones	2.8 mmol/l

Arterial blood gases:

pH 7.31
PaO ₂ 20.2 kPa
PaCO ₂ 3.0 kPa
Bicarbonate 16 mmol/l
Lactate 4 mmol/l

What is the unifying diagnosis?

	Diabetic ketoacidosis (DKA)
	Lactic acidosis
	Hyperosmolar hyperglycaemic state (HHS)
	Urinary tract sepsis
	Chest sepsis

Dashboard

Overall score: 0%

1 -

Question 66 of 79



A 62 year old male, recently emigrated from India, presents with 5 day history of feeling generally unwell. His niece, who has accompanied him to hospital, denies a history of recent productive cough, diarrhoea or vomiting or dysuria. Her uncle had been gradually increasingly malaised over the past 5 days and not eating and drinking well. He has no known past medical history. On examination, he has dry mucous membranes and cool peripheries, his JVP is +1cm above the angle of Louis. Heart sounds, chest and abdomen are unremarkable. Urine dip and chest radiograph are awaited. His blood tests are as follows:

WBC	16 * 10 ⁹ /l
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Na ⁺	152 mmol/l
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CRP	38 mg/l
Glucose	38 mmol/l
Ketones	2.8 mmol/l

Arterial blood gases:

pH 7.31
PaO ₂ 20.2 kPa
PaCO ₂ 3.0 kPa
Bicarbonate 16 mmol/l
Lactate 4 mmol/l

What is the unifying diagnosis?

	Diabetic ketoacidosis (DKA)
	Lactic acidosis
	Hyperosmolar hyperglycaemic state (HHS)
	Urinary tract sepsis
	Chest sepsis

Dashboard

Overall score: **0%**

1 -

□ Question 67 of 79



A 78-year-old female attends the diabetes clinic. She has longstanding type 2 diabetes. Over the last few years she has become increasingly frail. Her main complaint is recurrent nausea and vomiting. Earlier this year she underwent endoscopy and gastric emptying studies which confirmed gastroparesis. She has since been started on metoclopramide which has had minimal effect on her symptoms. Her weight has decreased by 10% over the past year with a current BMI of 26 kg/m².

Her HbA1c today at the clinic is 44 IFCC mmol/l (6.2%) having been 60 IFCC mmol/l (7.6%) this time last year.

Her past medical history includes chronic kidney disease stage 3 and aortic stenosis.

Her current therapy is Humulin M3 22 units at breakfast and dinner, metformin 500mg BD, ramipril 5mg OD, bendroflumethiazide 2.5mg OD, aspirin 75 mg OD.

She lives alone and is still driving. She denies the need for carers, however, she has had 3 falls in the past month. She describes particular difficulty getting up in the morning and says her mood can often be low in the mornings.

She checks her blood sugar once daily in the morning with the following results.

Saturday	3.1 mmol/l
Sunday	4.0 mmol/l
Monday	4.1 mmol/l
Tuesday	3.2 mmol/l
Wednesday	14.6 mmol/l
Thursday	3.5 mmol/l
Friday	16.1 mmol/l

What is the correct step in the management of her diabetes?

Change Humulin M3 to a glucagon-like-peptide 1 receptor agonist

	Stop metformin
	Add sitagliptin
	Change Humulin M3 to 20 units in the morning and 10 units in the evening
	Change Humulin M3 to 30 units once daily

Dashboard

Overall score: 0%

1 -

□ Question 67 of 79



A 78-year-old female attends the diabetes clinic. She has longstanding type 2 diabetes. Over the last few years she has become increasingly frail. Her main complaint is recurrent nausea and vomiting. Earlier this year she underwent endoscopy and gastric emptying studies which confirmed gastroparesis. She has since been started on metoclopramide which has had minimal effect on her symptoms. Her weight has decreased by 10% over the past year with a current BMI of 26 kg/m².

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Her past medical history includes chronic kidney disease stage 3 and aortic stenosis.

Her current therapy is Humulin M3 22 units at breakfast and dinner, metformin 500mg BD, ramipril 5mg OD, bendroflumethiazide 2.5mg OD, aspirin 75 mg OD.

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Change Humulin M3 to a glucagon-like-peptide 1 receptor agonist

	Stop metformin
	Add sitagliptin
	Change Humulin M3 to 20 units in the morning and 10 units in the evening
	Change Humulin M3 to 30 units once daily

Dashboard

Overall score: **0%**
1 -

□ Question 68 of 79



A 56-year-old man with a history of hypertension presents for review. As part of his annual health check he has a U&E, HbA1c and cholesterol check done. The following results are obtained:

His blood pressure today is 128/78 mmHg. His only regular medication is ramipril 5mg od.

Na ⁺	142 mmol/l
K ⁺	4.6 mmol/l
Urea	5.2 mmol/l
Creatinine	88 µmol/l
Total cholesterol	5.2 mmol/l
HbA1c	45 mmol/mol (6.3%)

His 10-year QRISK2 score is 7%. What is the most appropriate action following these results?

	Start atorvastatin 20mg on
	Arrange a fasting glucose sample
	Diagnose type 2 diabetes mellitus
	Increase the dose of ramipril
	Add amlodipine 5mg od

Dashboard

Overall score: 0%

□ Question 68 of 79



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	Start atorvastatin 20mg on
	Arrange a fasting glucose sample
	Diagnose type 2 diabetes mellitus
	Increase the dose of ramipril
	Add amlodipine 5mg od

Dashboard

Overall score: **0%**

Question 68 of 79

A 56-year-old man with a high blood pressure has had his HbA1c and cholesterol checked.

His blood pressure today is 142/92 mmHg.

Na ⁺	142 mmol/L
K ⁺	4.6 mmol/L
Urea	5.2 mmol/L
Creatinine	88 µmol/L
Total cholesterol	5.2 mmol/L
HbA1c	45 mmol/mol (6.3%)

Fasting glucose:

<= 6.0 mmol/L

>= 6.0 mmol/L

Normal glycaemic control

Prediabetes

HbA1c is 42-47 mmol/mol (6.0-6.4%)
or
Fasting glucose 6.1-6.9 mmol/L

HbA1c:

<= 41 mmol/mol
(5.9%)

>= 48 mmol/mol

i.e. values equal to this or below are considered normal

i.e. values above this threshold are considered abnormal

His 10-year QRISK2 score is 7%. What is the most appropriate action following these results?

<input type="radio"/>	Start atorvastatin 20mg on alternate days
<input type="radio"/>	Arrange a fasting glucose sample
<input type="radio"/>	Diagnose type 2 diabetes mellitus
<input type="radio"/>	Increase the dose of ramipril
<input type="radio"/>	Add amlodipine 5mg od

□ Question 69 of 79



A 41-year-old woman is admitted to hospital with acute epigastric abdominal pain that radiates to her back. She has nausea but has not vomited. A diagnosis of acute pancreatitis is suspected and she is commenced on intravenous fluids. Her observations include a blood pressure of 129/72 mmHg, pulse of 88 bpm, and oxygen sats of 97%.

Blood tests are performed and reveal:

Hb	13.9 g/l
Platelets	194 * 10 ⁹ /l
WBC	8.6 * 10 ⁹ /l
Na ⁺	139 mmol/l
K ⁺	4.2 mmol/l
Urea	4.1 mmol/l
Creatinine	92 µmol/l
Bilirubin	10 µmol/l
ALP	39 u/l
ALT	34 u/l
γGT	44 u/l
Albumin	48 g/l
Triglycerides	12.1 mmol/l
HDL cholesterol	1.1 mmol/l
LDL cholesterol	3.5 mmol/l

What is the most appropriate treatment for this patients condition?

	Atorvastatin
	Fenofibrate
	Lovastatin
	Ezetimibe
	Alirocumab

Dashboard

Overall score: **0%**

1 -

□ Question 69 of 79



A 41-year-old woman is admitted to hospital with acute epigastric abdominal pain that radiates to her back. She has nausea but has not vomited. A diagnosis of acute pancreatitis is suspected and she is commenced on intravenous fluids. Her observations include a blood pressure of 129/72 mmHg, pulse of 88 bpm, and oxygen sats of 97%.

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Albumin	48 g/l
Triglycerides	12.1 mmol/l
HDL cholesterol	1.1 mmol/l
LDL cholesterol	3.5 mmol/l

What is the most appropriate treatment for this patients condition?



	Atorvastatin
	Fenofibrate
	Lovastatin
	Ezetimibe
	Alirocumab

Dashboard

Overall score: **0%**
1 -

□ Question 70 of 79



A 80-year-old patient was referred to Accident and Emergency after being found unresponsive in his home. He had just completed a course of antibiotics for a chest infection. He had not been seen for the preceding 36 hours. He had a past medical history of hypertension and type two diabetes.

His medication included Metformin, Gliclazide, Humulin M3 insulin twice a day, Ramipril and Bendroflumethiazide.

His initial examination revealed. Blood pressure 104/53, heart rate 103 beats per minute, respiratory rate 24 and oxygen saturations 90% on air. He had inspiratory crackles on his left lower lung zone. He had sunken eyes, capillary refill time of four seconds and no lower limb swelling. GCS 13 out of 15.

Initial blood tests;

Hb	11.0 g/dL
WCC	$21.4 \times 10^9/l$
Platelets	$189 \times 10^9/l$
CRP	340 mg/L
Na+	149 mmol/l
K+	4.4mmol/l
Ur	28 mmol/l
Cr	180 μ mol/l
Glucose	54mmol/l

ABG on air

pH	7.32
pCO2	3.7kPa
pO2	9kPa

HCO3	18 mmol/l
Lactate	2.4mmol/l

Urine dipstick analysis - ++ glucose, - WCC, - leucocytes, + ketones

The patient was treated with oxygen, intravenous antibiotics for a chest infection and prophylactic low molecular weight heparin. They were treated with the local diabetic ketoacidosis protocol with IV inulin sliding scale and IV fluids 5500ml in 24 hours.

His repeat bloods 12 hours later were;

Na+	132 mmol/l
K+	3.9 mmol/l
Ur	12 mmol/l
Cr	110 µmmol/l
Glucose	5 mmol/l
HCO3	24 mmol/l
Lactate	1.7 mmol/l
CRP	270mg/l

The patient developed a grand mal seizure. His Glasgow coma scale remained 10 an hour after the seizure.

What is the most likely cause of his neurological deterioration?

	Hypoglycaemia
	Intracranial venous sinus thrombosis
	Cerebral oedema
	Sepsis
	Renal failure

Dashboard

Overall score: 0%

1 -

□ Question 70 of 79



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The patient was treated with oxygen, intravenous antibiotics for a chest infection and prophylactic low molecular weight heparin. They were treated with the local diabetic ketoacidosis protocol with IV insulin sliding scale and IV fluids 5500ml in 24 hours.

His repeat bloods 12 hours later were;

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	Hypoglycaemia
	Intracranial venous sinus thrombosis
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	Sepsis
	Renal failure

Dashboard

Overall score: **0%**

1 -

□ Question 71 of 79

□ □

An 18-year-old male with no prior medical history is admitted to the resuscitation room of Emergency Department where you are asked to assess him. He is noted to be hypotensive, tachycardic and febrile. Further assessment highlights a widespread, non-blanching, purple rash. He is diagnosed with meningococcal septicaemia and is treated appropriately. Nevertheless, his condition deteriorates further when he also develops Waterhouse-Friderichsen syndrome. Which of the following sets of blood results would be most consistent with his condition at this point?

	Na+ 147mmol/L, K+ 5.8mmol/L, Glucose 7.5mmol/L
	Na+ 147mmol/L, K+ 3.0mmol/L, Glucose 2.0mmol/L
	Na+ 129mmol/L, K+ 5.8mmol/L, Glucose 2.0mmol/L
	Na+ 147mmol/L, K+ 5.8mmol/L, Glucose 11.5mmol/L
	Na+ 129mmol/L, K+ 5.8mmol/L, Glucose 11.5mmol/L

Dashboard

Overall score: 0%

1 -

□ Question 71 of 79

□ □

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	Na+ 147mmol/L, K+ 3.0mmol/L, Glucose 2.0mmol/L
	Na+ 129mmol/L, K+ 5.8mmol/L, Glucose 2.0mmol/L
	Na+ 147mmol/L, K+ 5.8mmol/L, Glucose 11.5mmol/L
	Na+ 129mmol/L, K+ 5.8mmol/L, Glucose 11.5mmol/L

Dashboard

Overall score: **0%****1** -

Question 71 of 79



An 18-year-old male with no prior medical history is admitted to the resuscitation room of Emergency Department where you are asked to assess him. He is noted to be hypotensive, tachycardic and febrile. Further assessment highlights a widespread, non-blanching, purple rash. He is diagnosed with meningococcal septicaemia and is treated appropriately. Nevertheless, his condition deteriorates further when he also develops Waterhouse-Friderichsen syndrome. Which of the following sets of blood results would be most consistent with his condition at this point?

	Na+ 147mmol/L, K+ 5.8mmol/L, Glucose 7.5mmol/L
	Na+ 147mmol/L, K+ 3.0mmol/L, Glucose 2.0mmol/L
	Na+ 129mmol/L, K+ 5.8mmol/L, Glucose 2.0mmol/L
	Na+ 147mmol/L, K+ 5.8mmol/L, Glucose 11.5mmol/L
	Na+ 129mmol/L, K+ 5.8mmol/L, Glucose 11.5mmol/L

Dashboard

Overall score: 0%
1 -



□ Question 72 of 79



A 32-year-old alcoholic presents with abdominal pain and vomiting. His amylase is 1200 U/l and he is being treated for acute pancreatitis. You are called to see him as the nursing staff report the patient is becoming restless. He complains of numbness around his mouth and appears to be in some discomfort.

Your foundation year 2 colleague notes this morning's blood results:

Adjusted calcium	1.8mmol/l
Na ⁺	136 mmol/l
K ⁺	3.7 mmol/l
Urea	6.9 mmol/l
Creatinine	81 µmol/l

What's the next step in management?

	Parathyroid hormone
	Oral calcium supplementation
	Calcitonin assay
	Intravenous 10% calcium gluconate
	Serum magnesium

Dashboard

Overall score: 0%

1 -

Question 72 of 79

□ □

A 32-year-old alcoholic presents with abdominal pain and vomiting. His amylase is 1200 U/l and he is being treated for acute pancreatitis. You are called to see him as the nursing staff report the patient is becoming restless. He complains of numbness around his mouth and appears to be in some discomfort.

Your foundation year 2 colleague notes this morning's blood results:

Adjusted calcium	1.8mmol/l
Na ⁺	136 mmol/l
K ⁺	3.7 mmol/l
Urea	6.9 mmol/l
Creatinine	81 µmol/l

What's the next step in management?

	Parathyroid hormone
	Oral calcium supplementation
	Calcitonin assay
	Intravenous 10% calcium gluconate
	Serum magnesium

Dashboard

Overall score: **0%**

1 -

□ Question 73 of 79



A 25 year old woman presents to the endocrinology clinic. She is concerned because her father had a 'brain tumour' removed 2 years ago and has now been told he has another tumour in his abdomen after going to his doctor with reflux and indigestion. He has been told it might be a genetic problem and is awaiting testing. She is concerned she might also have the condition and so her GP has referred her to the clinic.

She is currently asymptomatic.

On examination there is no abnormality on the cardiovascular, respiratory, abdominal or neurological examinations.

The doctor explain that the most appropriate person to see would be the geneticist to whom her father has been referred. He asks her to obtain the details if her father is willing to provide them and says that he will refer her. In the meaning time he offers to carry out some screening blood tests.

Given the likely underlying diagnosis, which of the following is most likely to be abnormal?

	Cortisol
	Fasting glucose
	Parathyroid hormone
	Prolactin
	Thyroid stimulating hormone

Dashboard

Overall score: 0%

1 -

□ Question 73 of 79



A 25 year old woman presents to the endocrinology clinic. She is concerned because her father had a 'brain tumour' removed 2 years ago and has now been told he has another tumour in his abdomen after going to his doctor with reflux and indigestion. He has been told it might be a genetic problem and is awaiting testing. She is concerned she might also have the condition and so her GP has referred her to the clinic.

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	Cortisol
	Fasting glucose
	Parathyroid hormone
	Prolactin
	Thyroid stimulating hormone

Dashboard

Overall score: **0%**

1 -

Question 73 of 79

□ □

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She is currently asymptomatic.

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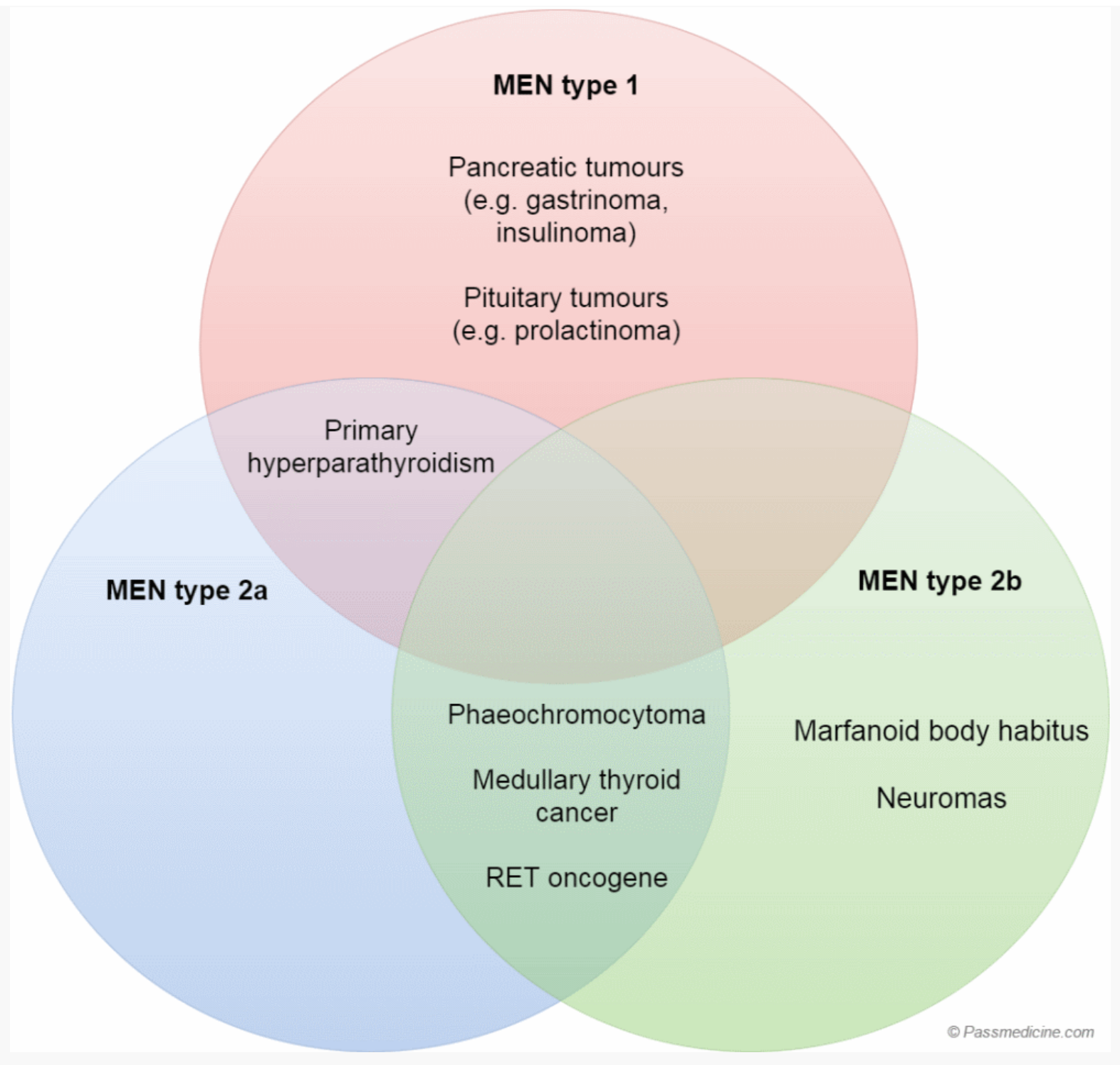
Given the likely underlying diagnosis, which of the following is most likely to be abnormal?

	Cortisol
	Fasting glucose
	Parathyroid hormone
	Prolactin
	Thyroid stimulating hormone

Dashboard

Overall score: 0%

1 -



□ Question 74 of 79



A 34-year-old man of ethnic Indian origin is reviewed in endocrinology clinic. He has type 1 diabetes. He has a twice-daily mixed insulin regime but has poor diabetic control with elevated HbA1c and high blood glucose. He wants to improve his diabetic control but is concerned about increasing his insulin dose or frequency as he is already overweight with a body mass index (BMI) of 29kg/m².

Apart from increasing insulin, are there any other medical management options to better control his diabetes?

	No further medical treatment
	Metformin
	Gliclazide
	Acarbose
	Pioglitazone

Dashboard

Overall score: 0%

1 -

□ Question 74 of 79



A 34-year-old man of ethnic Indian origin is reviewed in endocrinology clinic. He has type 1 diabetes. He has a twice-daily mixed insulin regime but has poor diabetic control with elevated HbA1c and high blood glucose. He wants to improve his diabetic control but is concerned about increasing his insulin dose or frequency as he is already overweight with a body mass index (BMI) of 29kg/m².

Apart from increasing insulin, are there any other medical management options to better control his diabetes?

	No further medical treatment
	Metformin
	Gliclazide
	Acarbose
	Pioglitazone

Dashboard

Overall score: **0%**

1 -

□ Question 75 of 79



A 28 year old lady has noticed over the last year that she does not tolerate cold weather well. She is fatigued and her partner notices that she is also low in mood despite having no obvious triggers. Physical examination is unremarkable. Her electrocardiogram (ECG) demonstrates a sinus rhythm at 43 beats per minute. She has a background of type 1 diabetes mellitus for which she takes insulin. She also has coeliac disease. Her blood results are shown below:

Hb	136 g/dl
MCV	103 fL

Na	133 mmol/l
K	4 mmol/l
Urea	3.5 mmol/l
Creatinine	70 µmol/l

Glycosylated haemoglobin (HbA1c)	51 mmol/mol (6.8%)
TSH	9.2 mIU/L (reference range 0.3-4.0 mIU/L)
T3	2 pmol/L (reference range 3-9 pmol/L)
T4	5 pmol/L (reference range 9-25 pmol/L)

What is the next best step in her management?

	Commence levothyroxine
	Commence carbimazole
	Ultrasound scan thyroid
	MRI pituitary

	Short synacthen test
--	----------------------

Dashboard

Overall score: **0%**

1 -

□ Question 75 of 79



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What is the next best step in her management?

	Commence levothyroxine
	Commence carbimazole
	Ultrasound scan thyroid
	MRI pituitary

Dashboard

Overall score: **0%**

1 -

Question 76 of 79

□ □

A 29-year-old nulligravida woman attends her GP as she has not menstruated for 6 months. Menarche was at age 14. She had irregular periods from age 14-16, and then took oral hormonal contraception until last year when she got married. The patient does not know her family history as she is adopted. She is otherwise fit and well, enjoying running recreationally and eating healthy. She does not drink, smoke or use illicit drugs. Her vital signs are normal and body mass index is 22 kg/m².

Physical examination shows no abnormalities. Urine pregnancy test is negative.

Which of the following is the most appropriate screening test for this patient?

	Karyotype
	MRI of the pituitary
	Serum 17-hydroxyprogesterone
	Serum prolactin
	Ultrasound of the pelvis

Dashboard

Overall score: 0%

1 -

Question 76 of 79

□ □

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Physical examination shows no abnormalities. Urine pregnancy test is negative.

Which of the following is the most appropriate screening test for this patient?

	Karyotype
	MRI of the pituitary
	Serum 17-hydroxyprogesterone
	Serum prolactin
	Ultrasound of the pelvis

Dashboard

Overall score: **0%**

1 -

□ Question 77 of 79



A 54-year-old man presents to the diabetes clinic for review. He has had symptoms of polyuria, polydipsia and lethargy over the past few months, and his fasting glucose is elevated at 7.6 mmol/l. He has no history of diabetes in his family and is currently treated for hypertension and dyslipidaemia by his GP. On examination his blood pressure is 155/90 mmHg, pulse is 70 beats per minute and regular. His body mass index is 34 kg/m². Other blood tests of note include GAD+ antibodies, renal function is normal.

Which of the following is most appropriate with respect to managing his glucose control?

	Gliclazide
	Liraglutide
	Metformin
	Sitagliptin
	Basal bolus insulin

Dashboard

Overall score: 0%

1 -

□ Question 77 of 79



A 54-year-old man presents to the diabetes clinic for review. He has had symptoms of polyuria, polydipsia and lethargy over the past few months, and his fasting glucose is elevated at 7.6 mmol/l. He has no history of diabetes in his family and is currently treated for hypertension and dyslipidaemia by his GP. On examination his blood pressure is 155/90 mmHg, pulse is 70 beats per minute and regular. His body mass index is 34 kg/m². Other blood tests of note include GAD+ antibodies, renal function is normal.

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Dashboard

Overall score: **0%**

1 -

Question 77 of 79

□ □

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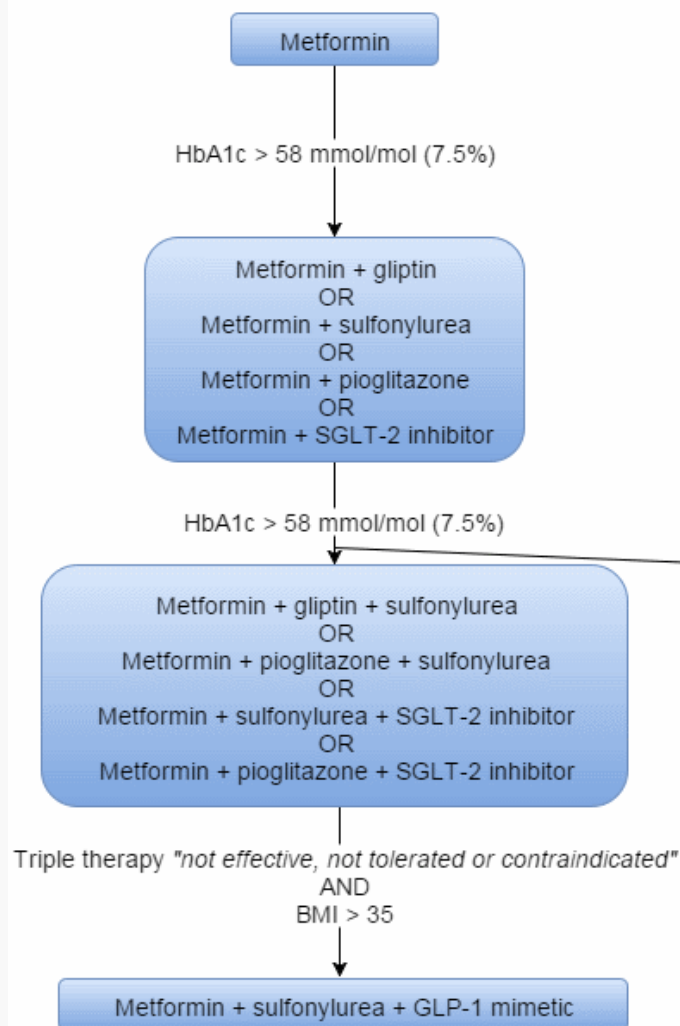
	Gliclazide
	Liraglutide
	Metformin
	Sitagliptin
	Basal bolus insulin

Dashboard

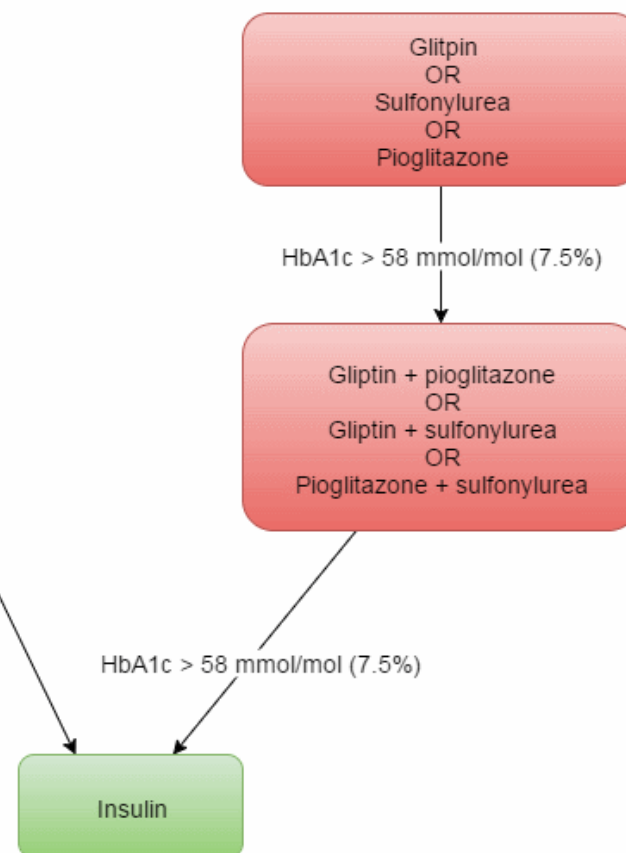
Overall score: **0%**

1 -

Metformin



Metformin not tolerated or CI



Question 77 of 79

A 54-year-old man presents over the past few months, a and is currently treated for 1 mmHg, pulse is 70 beats per GAD+ antibodies, renal func

Which of the following is mc

<input type="radio"/>	Gliclazide
<input type="radio"/>	Liraglutide
<input checked="" type="radio"/>	Metformin
<input type="radio"/>	Sitagliptin
<input type="radio"/>	Basal bolus insulin

Primary prevention

(10-year cardiovascular risk $\geq 10\%$ OR
most type 1 diabetics OR
CKD if eGFR $< 60\text{ml/min/m}^2$)



Atorvastatin 20mg od

(if non-HDL has not fallen by $\geq 40\%$ then
consider titrating up to 80mg)

Dashboard

Overall score: 0%

1 -

Question 78 of 79

□ □

A 19-year-old with type 1 diabetes presents to the Emergency Department feeling unwell. She states she has had vomiting and diarrhoea for 2 days and has not been taking her full insulin doses as she has been off her food. Her capillary glucose is 37 mmol/l and there are 4+ ketones on urinalysis.

An arterial blood gas is performed and the results are as follows:

pH	7.12
pO ₂	13 kPa
pCO ₂	3.5 kPa
HCO ₃	13
Na	129 mmol/l
K	6.1 mmol/l

Which of the following is the most appropriate initial management?

	IV 0.9% NaCl bolus
	IV 10 units actrapid + 50ml 50% dextrose
	IV 8.4% sodium bicarbonate
	Empirical IV antibiotics
	Insulin sliding scale

Overall score: **0%**

1 -

Question 78 of 79

□ □

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	IV 10 units actrapid + 50ml 50% dextrose
	IV 8.4% sodium bicarbonate
	Empirical IV antibiotics
	Insulin sliding scale

Overall score: **0%**

1 -

Question 79 of 79



A 38 year old lady presents to clinic with her 69 year old mother for a follow up appointment. The mother had presented 3 months previously under the acute medical take with headaches, sweating, abdominal pain and wild fluctuations in blood pressure. She is currently being followed up by the appropriate surgical team and her symptoms are currently well controlled with medical treatments. On examination today, you note a lump in her anterior neck and you are given the following blood tests:

Calcium (corrected)	3.68 mmol/l
Phosphate	0.38 mmol/l
Vitamin D3	115 nmol/l (75-200 nmol/l)
Parathyroid hormone	19 pmol/l (0.8 - 8.5 pmol/l)

You have referred the patient to endocrine surgeons for neck biopsies and urgent review. The daughter is concerned she may have the same symptoms later in life. What should you offer the daughter?

<input type="checkbox"/>	Reassurance
<input type="checkbox"/>	Genetic testing for patient and daughter
<input type="checkbox"/>	Offer annual follow up for surveillance
<input type="checkbox"/>	CT abdomen/pelvis with contrast
<input type="checkbox"/>	Serum bone and calcium homeostasis profile

Dashboard

Overall score: 0%

□ Question 79 of 79



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	Reassurance
	Genetic testing for patient and daughter
	Offer annual follow up for surveillance
	CT abdomen/pelvis with contrast
	Serum bone and calcium homeostasis profile

Dashboard

Overall score: **0%**

□ Question 79 of 79

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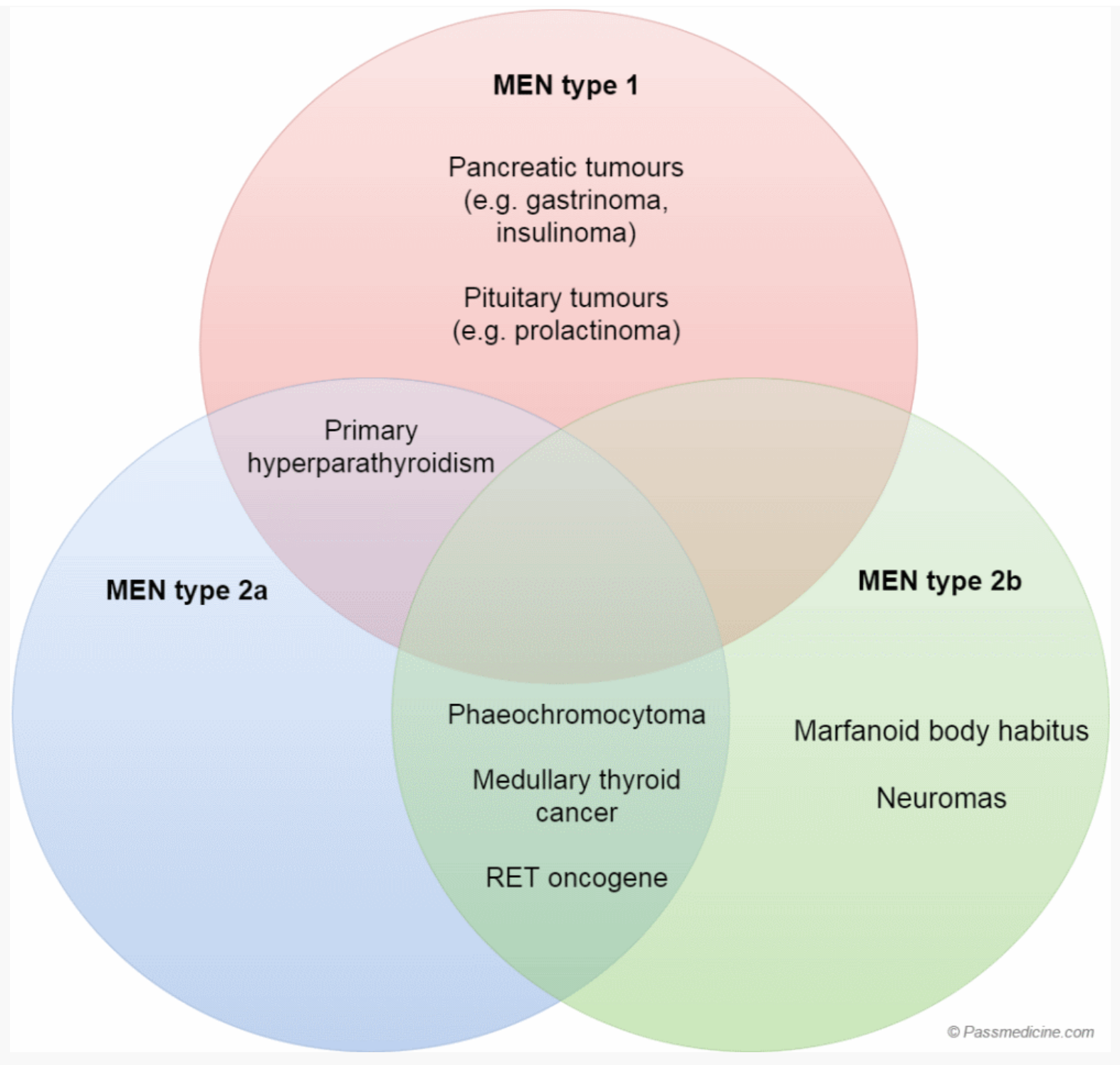
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Dashboard

Overall score: 0%

1 -



□ Question 1 of 204

□ □

A 33 year-old man from Turkey presents with a 24 hour history of abdominal pain and fever. The pain is generalised, 8/10 on the pain scale and is constant. There is no evidence of jaundice or organomegaly and bowel sounds are present. He does not know of any family history as he is adopted and does not take any regular medication. Examination reveals guarding and a temperature of 38.9°C, blood pressure 160/90 mmHg and a pulse rate of 95 beats per minute. His previous history includes two admissions in the past for abdominal pain, although the exact cause of this was not known.

Abdominal imaging does not show anything remarkable and his symptoms resolve after 30 hours. What is the most appropriate management for this condition?

	Indomethacin
	Corticosteroids
	Diclofenac
	Co-dydramol
	Colchicine

Dashboard

Overall score: 0%

1 -

Question 1 of 204

□ □

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	Indomethacin
	Corticosteroids
	Diclofenac
	Co-dydramol
	Colchicine

Dashboard

Overall score: **0%**

1 -

□ Question 2 of 204

□ □

A 45-year-old woman is reviewed in rheumatology clinic. She has rheumatoid arthritis and has been on methotrexate for many years. Over the past 6 months her LFTs have become abnormal.

Bilirubin	13 $\mu\text{mol/l}$
ALP	179 u/l
ALT	63 u/l
γGT	101 u/l
Albumin	31 g/l

Which blood test will help determine the underlying pathology?

	Ferritin
	Anti-LKM antibody
	Anti-smooth muscle antibody
	Anti-mitochondrial antibody
	Alpha fetoprotein

Dashboard

Overall score: 0%

1 -

□ Question 2 of 204

□ □

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	Ferritin
	Anti-LKM antibody
	Anti-smooth muscle antibody
	Anti-mitochondrial antibody
	Alpha fetoprotein

Dashboard

Overall score: **0%****1** -

□ Question 3 of 204



You are asked to see a young man on the gastroenterology ward because of increasing abdominal discomfort. Looking through his notes you notice that he is a patient with known alcoholic cirrhosis and that he's been admitted with worsening ascites (which the consultant has described as grade 3/3 or large). The patient's recent laboratory results are as follows:

Na ⁺	133 mmol/l
K ⁺	4.1 mmol/l
Urea	1.2 mmol/l
Creatinine	64 µmol/l
Bilirubin	23 µmol/l
ALP	151 u/l
ALT	7 u/l
Albumin	26 g/l

Ascitic Tap:

WCC count	300cells/mm ²
Differential	70% polymorphs
Albumin	14

Talking to the patient it is obvious that he's uncomfortable with this ascites, and on examination his abdomen is significantly distended and tense. From his drug chart you can see that he is currently taking spironolactone 50mg twice daily and is currently on Pabrinex and chlordiazepoxide reducing regimen currently on 30mg four times daily.

What is the next step in managing his ascites?

--	--

	Fluid restrict him to 1L
	Increase spironolactone to 100mg BD
	Add furosemide 40mg BD to his current diuretic regimen
	Therapeutic aspiration
	Large volume abdominal paracentesis

Dashboard

Overall score: **0%**

1 -

□ Question 3 of 204



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	Therapeutic aspiration
	Large volume abdominal paracentesis

Dashboard

Overall score: **0%**

1 -

□ Question 4 of 204

□ □

A 63-year-old man is referred for an OGD after a 5 month history of epigastric pain after eating. He is also suffering from significant reflux and dyspepsia. His OGD shows 2 duodenal ulcers, and a CLO test taken at the time is positive. He also suffers from hypertension and type 2 diabetes, which are controlled with amlodipine and metformin. He is allergic to penicillin.

What is the current gold standard treatment for *H. pylori* eradication for this patient?

	Pantoprazole, metronidazole and levofloxacin
	Amoxicillin, clarithromycin and omeprazole
	Omeprazole, clarithromycin and metronidazole
	Bismuth, tetracycline, metronidazole, omeprazole
	Clarithromycin, levofloxacin and lansoprazole

Dashboard

Overall score: 0%

1 -

Question 4 of 204

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	Clarithromycin, levofloxacin and lansoprazole

Dashboard

Overall score: **0%**

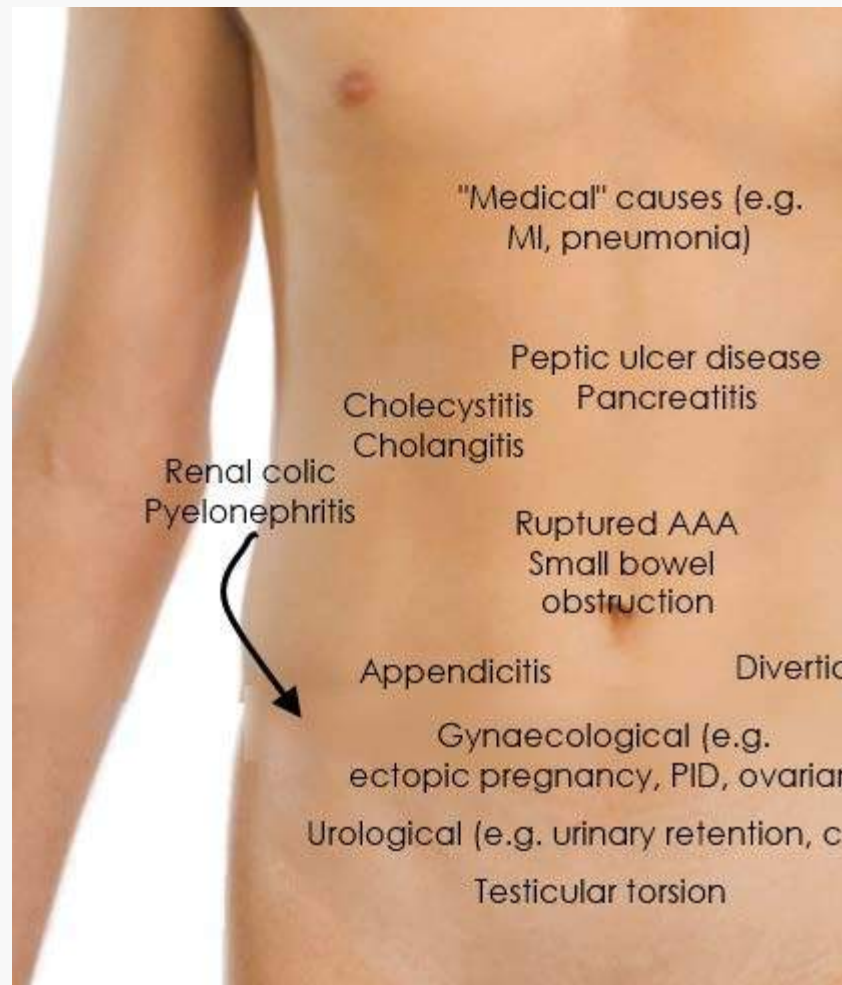
1 -

Question 4 of 204

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	Omeprazole, clarithromycin and metronidazole
	Bismuth, tetracycline, metronidazole, omeprazole
	Clarithromycin, levofloxacin and lansoprazole



Dashboard

Overall score: 0%

1 -

□ Question 5 of 204



A 55-year-old male was referred to the gastroenterology clinic after presenting with a 3-month history of yellow discolouration of his skin. He stated that his skin had become rather itchy, and in addition, his urine had become darker. After following the 'Abnormal Liver Function Test Protocol' the GP referred the patient to the clinic, having not been able to identify a cause of his symptoms. The gentleman was otherwise well in himself, denying the presence of abdominal pain, bloating or weight loss. He smoked 10 cigarettes per day and consumed 42 units of alcohol per week. His past medical history comprised diet controlled type 2 diabetes mellitus, hypertension, hypercholesterolaemia and asthma for which he was prescribed amlodipine 5mg OD, simvastatin 40mg ON, Seretide 125 BD and salbutamol PRN. Of note, he has hospitalised 4 months ago with pneumonia and was treated with 2 days of intravenous co-amoxiclav, before being switched over to oral co-amoxiclav for a further five days.

Examination revealed the presence of a well male, with a temperature of 37.1 C, heart rate of 72 bpm, respiratory rate of 16 and blood pressure of 152/76 mmHg. He appeared mildly jaundiced but other than this examination of his gastrointestinal system was unremarkable. Examination of his cardiovascular and respiratory systems was otherwise also unremarkable.

Initial investigations revealed:

Hb	139 g/l
Platelets	222 * 10 ⁹ /l
WBC	6.1 * 10 ⁹ /l
INR	1.0

HbA1c	52 mmol/mol
Bilirubin	62 µmol/l
ALP	112 u/l
AST	24 u/l
ALT	26 u/l

γGT	64 u/l
Albumin	38 g/l
Protein	78 g/l
Adj calcium	2.32 mmol/l

Anti nuclear antibody	negative
p-ANCA	negative
c-ANCA	negative
Anti-mitochondrial antibodies	negative
Anti smooth muscle antibodies	negative
Anti liver and kidney antibodies	negative
Serum electrophoresis	normal appearance

USS liver, abdomen and pancreas: normal appearance of all intraabdominal organs including that of liver and pancreas. Normal appearance of the biliary tree.

What is the most likely diagnosis?

	Cholestasis secondary to co-amoxiclav
	Non alcoholic steatohepatitis (NASH)
	Alcoholic hepatitis
	Primary biliary cirrhosis
	Primary sclerosing cholangitis

Dashboard

Overall score: 0%

1 -

γGT	64 u/l
Albumin	38 g/l
Protein	78 g/l
Adj calcium	2.32 mmol/l

Anti nuclear antibody	negative
p-ANCA	negative
c-ANCA	negative
Anti-mitochondrial antibodies	negative
Anti smooth muscle antibodies	negative
Anti liver and kidney antibodies	negative
Serum electrophoresis	normal appearance

USS liver, abdomen and pancreas: normal appearance of all intraabdominal organs including that of liver and pancreas. Normal appearance of the biliary tree.

What is the most likely diagnosis?

	Cholestasis secondary to co-amoxiclav
	Non alcoholic steatohepatitis (NASH)
	Alcoholic hepatitis
	Primary biliary cirrhosis
	Primary sclerosing cholangitis

Dashboard

Overall score: **0%**

1 -

□ Question 6 of 204



A 78 year old woman is admitted to the acute medical unit due to shortness of breath. She had been living alone at home for the last 3 years since her husband died. In the last 6 months she was struggling to manage due to fatigue, nausea and progressive breathlessness. She had noticed that her clothing was feeling tighter but could not understand why as she had reduced appetite and was eating less than normal. She is a non smoker and drank 1-2 bottles of wine per week since the death of her husband.

She has a history of ischaemic heart disease following an acute myocardial infarction two years previously. An echocardiogram 6 months after the acute event showed a mildly dilated left ventricle with good overall function (ejection fraction 45-55%) and mild aortic stenosis. Past medical history also includes a left mastectomy 17 years ago for a small breast carcinoma. Lymph node sampling at the time showed clear nodes so axillary clearance was not carried out. She has been discharged from follow up at the breast clinic.

On examination she is afebrile with no evidence of clubbing or splinter haemorrhages nor any spider naevi. Her chest was clear to auscultation with dullness to percussion at both bases. The cardiac apex was non-displaced and heart sounds were normal with an additional ejection systolic murmur. Her abdomen appeared distended with large volume ascites but was soft and non tender. Bowel sounds were normal.

Bloods showed the following:

Haemoglobin	101 g/L	Sodium	134 mmol/L
Platelets	159 x10 ⁹ /L	Potassium	3.8 mmol/L
White cell count	9.0 x10 ⁹ /L	Urea	3.5 mmol/L
Neutrophils	3.5 x10 ⁹ /L	Creatinine	67 micromol/L
ESR	21 mm/h	Albumin	31 g/L
CRP	34 mg/L	Bilirubin	7 micromol/L
ALT	29 iu/L		
Alkaline Phosphatase	51 iu/L		

Ascitic fluid analysis:

Fluid albumin	22 g/L
Fluid glucose	4.2
Fluid gram stain	negative

Which of the following is the most likely cause of her ascites?

	Alcoholic hepatitis
	Heart failure
	Peritoneal metastases from colon cancer
	Portal vein thrombosis
	Myxoedema due to hypothyroidism

Dashboard

Overall score: 0%

1 -

Fluid albumin	22 g/L
Fluid glucose	4.2
Fluid gram stain	negative

Which of the following is the most likely cause of her ascites?

	Alcoholic hepatitis
	Heart failure
	Peritoneal metastases from colon cancer
	Portal vein thrombosis
	Myxoedema due to hypothyroidism

Dashboard

Overall score: **0%**
1 -

□ Question 7 of 204

□ □

You are called to see a 35-year-old man on the Acute Medical Unit who is having a seizure.

He was admitted 2 days ago having presented acutely agitated to the Emergency Department. He gave a 10-year history of alcohol overuse and at that time had not had an alcoholic drink in 24 hours following an argument with his girlfriend where he vowed to give up alcohol. Prior to this he had been drinking 4-6 litres of cider per day plus additional spirits in variable amounts. He was admitted for detox and prescribed chlordiazepoxide, pabrinex and fluids. He has no other past medical history.

Nursing staff inform you that the patient has had no other seizures on this admission and has been eating and drinking small amounts today. However, he has been complaining of all over body pain and became confused 2-3 hours ago. The seizure is generalised tonic-clonic and self terminates after 3 minutes.

On examination post-seizure the patient is drowsy but responding to voice. His saturations are 100% on 15 litres oxygen via non-rebreathe mask and his temperature is 37.2 °C. His heart rate is 110 beats per minute and blood pressure is 126/72 mmHg. His chest is clear, abdomen soft and non-tender and there is no focal neurology.

Repeat blood tests and arterial blood gas are taken.

Which electrolyte abnormality is most likely to have caused his seizure?

	Hypocalcaemia
	Hypoglycaemia
	Hypokalaemia
	Hypomagnesaemia
	Hypophosphataemia

□ Question 7 of 204



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Repeat blood tests and arterial blood gas are taken.

Which electrolyte abnormality is most likely to have caused his seizure?

	Hypocalcaemia
	Hypoglycaemia
	Hypokalaemia
	Hypomagnesaemia
	Hypophosphataemia

□ Question 8 of 204



A 48 year-old woman attends the outpatient department with a four month history of myalgia, itching and malaise. She has no past medical history and no relevant family history. Apart from taking antihistamines for the itching, she takes no regular medication and has a 10 pack year history. She also drinks on average 5-10 units of alcohol per week.

Examination reveals mild jaundice, 3 spider naevi on her torso and 4 spider naevi on her face.

Blood tests reveal:

Bilirubin	132 μ mol/l
ALP	225 u/l
ALT	192 u/l
γ GT	84 u/l
Albumin	34 g/l
Antismooth muscle antibodies	Positive
Antinuclear antibodies	Positive
HBsAg	Negative
HBsAb	Positive
HBcAb	Negative

What is the most likely diagnosis?

	Type 3 autoimmune hepatitis
	Viral hepatitis
	Primary sclerosing cholangitis

	Type 2 autoimmune hepatitis
	Type 1 autoimmune hepatitis

Dashboard

Overall score: **0%**
1 -

	Type 2 autoimmune hepatitis
	Type 1 autoimmune hepatitis

Dashboard

Overall score: **0%**
1 -

□ Question 9 of 204

□ □

A 68-year-old man who is on aspirin following a myocardial infarction 2 years ago has been admitted and treated successfully endoscopically for a non-variceal upper gastrointestinal bleed with clips and adrenaline. What should be done in the acute phase with regards to this patient's aspirin therapy?

	Stop aspirin
	Replace aspirin with clopidogrel
	Continue aspirin
	Replace aspirin with low molecular weight heparin
	Replace aspirin with unfractionated heparin

Dashboard

Overall score: 0%

1 -

□ Question 9 of 204

□ □

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	Continue aspirin
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	Replace aspirin with unfractionated heparin

Dashboard

Overall score: **0%**

1 -

□ Question 10 of 204

□ □

A 35-year-old woman presents to hospital with a three-day history of acute abdominal pain and distension. Her past medical history includes asthma, coeliac disease and an unprovoked deep vein thrombosis in her left leg a year ago. Her medications include Symbicort 400/12 2 puffs BD and salbutamol PRN. She does not smoke and drinks approximately 12 units of alcohol a week. She works as a secretary in a legal firm. Her parents both suffer from type 2 diabetes mellitus.

On examination, her temperature is 37.7°C, pulse rate is 110 beats per minute and blood pressure is 130/80 mmHg. There is evidence of icterus in her sclera. Inspection of her abdomen reveals gross distension. There is hepatomegaly on palpation and shifting dullness on percussion. There is marked tenderness on palpation of the right upper quadrant of her abdomen.

Her blood tests show:

Hb	100 g/l	Na ⁺	138 mmol/l	Bilirubin	63 µmol/l
Platelets	740 * 10 ⁹ /l	K ⁺	5.2 mmol/l	ALP	295 u/l
WBC	14.2 * 10 ⁹ /l	Urea	5.1 mmol/l	ALT	230 u/l
Neuts	9.5 * 10 ⁹ /l	Creatinine	89 µmol/l	γGT	210 u/l
Lymphs	0.7 * 10 ⁹ /l			Albumin	26 g/l
INR	1.5	CRP	93 mg/L	Amylase	173 U/L

What is the most likely diagnosis?

	Budd-Chiari syndrome
	Hepatic abscess
	Portal vein thrombosis
	Acute pancreatitis

Dashboard

Overall score: **0%**

1 -

□ Question 10 of 204



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Lymphs	0.7 * 10 ⁹ /l			Albumin	26 g/l
INR	1.5	CRP	93 mg/L	Amylase	173 U/L

What is the most likely diagnosis?

	Budd-Chiari syndrome
	Hepatic abscess
	Portal vein thrombosis
	Acute pancreatitis

□ Question 11 of 204

□ □

A 25-year-old with recently diagnosed ulcerative colitis is started on mesalazine after a recent tapering of high dose steroids. Two weeks later, he develops severe pain in his epigastrium and right upper quadrant. What is the most likely diagnosis?

	Hepatitis
	Acute pancreatitis
	Duodenal ulceration
	Flare in ulcerative colitis
	Primary sclerosing cholangitis

Dashboard

Overall score: 0%

1 -

Question 11 of 204

□ □

A 25-year-old with recently diagnosed ulcerative colitis is started on mesalazine after a recent tapering of high dose steroids. Two weeks later, he develops severe pain in his epigastrium and right upper quadrant. What is the most likely diagnosis?

	Hepatitis
	Acute pancreatitis
	Duodenal ulceration
	Flare in ulcerative colitis
	Primary sclerosing cholangitis

Dashboard

Overall score: **0%**

1 -

Question 12 of 204



A 71-year-old man presents with dysphagia which has been getting progressively worse for the past few months. He is generally fit and well other than a history of chronic obstructive pulmonary disease. On occasions he has regurgitated some food after eating a large meal.

On examination of his abdomen no masses are noted. A barium swallow with fluoroscopy is arranged:



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What is the most likely diagnosis?

Cystic hygroma

	Pharyngeal pouch
	Thyroglossal cyst
	Oesophageal cancer
	Achalasia

Dashboard

Overall score: **0%**
1 -

□ Question 13 of 204

□ □

A 58-year-old man known to homeless services is brought to the emergency department by ambulance. He has been unwell with fevers and abdominal pain. He also reports increasing abdominal distension. His past medical history is significant for drug and alcohol dependency with hepatitic C and cirrhotic liver disease. He does not engage with medical services and takes no regular medications. An ascitic tap is performed that confirmed spontaneous bacterial peritonitis. He is admitted for IV antibiotics. You are called to see him by the nursing staff who report that his is agitated and restless during the night and drowsy during the day. On examination, he is unaware of the time or his current location and demonstrates asterixis.

Given the most likely diagnosis, what medical therapy should be instituted?

	Lactulose - aiming for 3 stools/day, ceased after improvement
	Rifaximin - ceased after improvement
	Lactulose - aiming for 3 stools/day, continued after improvement
	Lactulose and rifaximin - continued after improvement
	Lactulose and rifaximin - ceased after improvement

Dashboard

Overall score: 0%

1 -

Question 13 of 204

□ □

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	Rifaximin - ceased after improvement
	Lactulose - aiming for 3 stools/day, continued after improvement
	Lactulose and rifaximin - continued after improvement
	Lactulose and rifaximin - ceased after improvement

Dashboard

Overall score: **0%**

1 -

□ Question 14 of 204



A 64 year-old woman is admitted to hospital with profuse, watery diarrhoea and abdominal cramps. The diarrhoea and cramps began 3 days ago and there is no reported blood or mucous in the stools. The patient also reports feeling hot, although she states this is probably due to the menopause. She had an episode of diarrhoea 2 weeks ago, which resolved on its own after five days and she blames these last two episodes on her lifestyle of eating regular takeaways due to her busy job and irregular shifts as a paramedic. Her past medical history includes asthma and hayfever. Her regular medications include ramipril and beclomethasone inhaler. She has a thirty pack year history and currently drinks a bottle of red wine per night.

Blood tests reveal:

Na ⁺	134 mmol/l
K ⁺	3.3 mmol/l
Urea	5.9 mmol/l
Creatinine	105 µmol/l
Bilirubin	6 µmol/l
ALP	35 u/l
ALT	242 u/l
γGT	70 u/l
Albumin	38 g/l

On examination, the patient has heart sounds 1 and 2 present with no added sounds. Lung fields are clear and abdominal exam reveals non-tender hepatomegaly.

What is the most likely diagnosis?

	Alcoholic liver disease
	Thyrotoxicosis

	Infective gastroenteritis
	Pseudomembranous colitis
	Carcinoid syndrome

Dashboard

Overall score: 0%

1 -

□ Question 14 of 204



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What is the most likely diagnosis?

	Alcoholic liver disease
	Thyrotoxicosis

	Infective gastroenteritis
	Pseudomembranous colitis
	Carcinoid syndrome

Dashboard

Overall score: **0%**
1 -

Question 15 of 204

□ □

A 33-year-old lady has a diagnosis of irritable bowel syndrome (IBS). She has previously been seen in the gastroenterology clinic and all investigations including colonoscopy were normal. She is mainly troubled by abdominal pain, bloating and constipation. She continues to have symptoms despite the use of antispasmodics, regular Movicol (macrogol laxative) and input from a dietician. She has tried other laxatives in the past with limited benefit. What would be the next most appropriate option?

	Lactulose
	Linacotide
	Loperamide
	Acupuncture
	Reflexology

Dashboard

Overall score: 0%

1 -

Question 15 of 204

□ □

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	Lactulose
	Linaclootide
	Loperamide
	Acupuncture
	Reflexology

Dashboard

Overall score: **0%**

1 -

Question 16 of 204

A 72-year-old man was diagnosed with colorectal cancer after a positive faecal occult blood test and microcytic anaemia on a routine health check. Following further investigations and resection, he is found to have an adenocarcinoma confined to the mucosa and submucosa. What is his 5-year survival based on his Dukes' stage?

	95%
	75%
	65%
	50%
	30%

Dashboard

Overall score: **0%**

1 -

□ Question 16 of 204

□ □

A 72-year-old man was diagnosed with colorectal cancer after a positive faecal occult blood test and microcytic anaemia on a routine health check. Following further investigations and resection, he is found to have an adenocarcinoma confined to the mucosa and submucosa. What is his 5-year survival based on his Dukes' stage?

	95%
	75%
	65%
	50%
	30%

Dashboard

Overall score: **0%**

1 -

Question 17 of 204



A 24-year-old female presents to general practice with a several week history of diarrhoea, passage of mucus, lethargy and abdominal discomfort relieved by defecation. A blood test is arranged showing the following:

Na ⁺	138 mmol/l
K ⁺	4.0 mmol/l
Urea	4.5 mmol/l
Creatinine	80 µmol/l

Hb	11 g/dl
Platelets	320 * 10 ⁹ /l
WBC	4.0 * 10 ⁹ /l
CRP	1.0 mg/l
Tissue transglutaminase antibody	neg

Which one of the following agents would be most suitable for her?

	Linacotide
	Codeine
	Sertraline
	Loperamide
	Amitriptyline

Overall score: **0%**

1 -

Question 17 of 204



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WBC	4.0 * 10 ⁹ /l
CRP	1.0 mg/l
Tissue transglutaminase antibody	neg

Which one of the following agents would be most suitable for her?

	Linacotide
	Codeine
	Sertraline
	Loperamide
	Amitriptyline

Dashboard

Overall score: **0%**

1 -

□ Question 18 of 204

□ □

A 17 year old male presents with 3 month history of PR bleeding, lower abdominal pain and left jaw pain. He reports an inability to gain weight and appears 'skinnier than his friends'. He has no other medical history. He knows his father and uncle have 'some problems with their bowels but they dont talk about it'. On examination, he has BMI 14.7 and abdomen is soft. PR is negative. Cardiovascular and respiratory examinations are normal. Limb neurological examination is unremarkable. However, when testing muscles of mastication, you note a raised boney mass in his left jaw that is tender in a non-cranial nerve distribution to palpation. Colonoscopy reveals hundreds of polyps in his small bowel. What is the diagnosis?

	Colorectal carcinoma
	Gardners syndrome
	Peutz-Jeghers syndrome
	Hereditary non-polyposis colorectal cancer
	Ulcerative colitis

Dashboard

Overall score: 0%

1 -

Question 18 of 204

□ □

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	Colorectal carcinoma
	Gardners syndrome
	Peutz-Jeghers syndrome
	Hereditary non-polyposis colorectal cancer
	Ulcerative colitis

Dashboard

Overall score: **0%****1** -

Question 19 of 204

□ □

A 50-year-old male with a long history of cirrhosis secondary to chronic hepatitis C is brought to the emergency department by his partner with a 2-day history of increasing confusion.

He is drowsy but is rousable to voice. He is able to obey commands but is not oriented to where he is. Further examination revealed significant hepatic flap, multiple spider naevi on the torso, and mild abdominal distension with shifting dullness.

He is afebrile and his partner denies any history of recent infection.

His blood sugar level is 6.8 mmol/L

Which of the following should be started next?

	Intravenous dextrose
	Regular intravenous haloperidol
	Oral rifaximin
	Intravenous midazolam
	Regular oral lactulose

Dashboard

Overall score: 0%

1 -

Question 19 of 204

□ □

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	Oral rifaximin
	Intravenous midazolam
	Regular oral lactulose

Dashboard

Overall score: **0%**

1 -

Question 20 of 204

□ □

A 32-year-old pregnant woman presents to the GP with jaundice and itchy skin for the past 2 weeks. She claims that is a lot worse during this pregnancy compared to her last one. History reveals that she is currently 30 weeks pregnant with no complications up until presentation. On examination, the only notable findings are mild jaundice seen in the sclerae, as well as excoriations around the umbilicus and flanks. She denies any tenderness in her abdomen during the examination. Blood tests show the following:

ALT	206 U/L
AST	159 U/L
ALP	796 umol/l
GGT	397 U/L
Bilirubin (direct)	56 umol/L
Bile salts	34 umol/L

Bile salts reference range	0 - 14 umol/L
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What is the most likely diagnosis?

	Obstetric cholestasis
	Budd-Chiari syndrome
	Acute hepatitis
	HELLP syndrome
	Acute fatty liver of pregnancy

Overall score: **0%**

1 -

Question 20 of 204



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What is the most likely diagnosis?

	Obstetric cholestasis
	Budd-Chiari syndrome
	Acute hepatitis
	HELLP syndrome
	Acute fatty liver of pregnancy

Overall score: **0%**
1 -

Question 21 of 204

A 53 year old presents with recurrent episodes of dysphagia to solids and fluids, resolving completely after 2 weeks. This is his third episode in 4 months. He reports weight loss of over two stones since the problem started and is fearful of further oral intake in case he vomits up any food he tries to ingest. He denies haematemesis or malaena. His past medical history includes angina, for which he currently takes minimal doses of GTN. He stopped taking isosorbide mononitrate prescribed to him by his cardiologist as it caused unbearable headaches. His mother died of pancreatic cancer and his uncle recently had an anterior resection for sigmoid colonic carcinoma. His GP initially improved his swallowing symptoms with nifedipine but they now have no effect. An OGD was unable to pass an obstruction at the proximal oesophagus. A barium swallow demonstrated a 'corkscrew appearance'. What is the next management?

	Change ISMN to diltiazem
	Oral imipramine
	Percutaneous endoscopic gastrostomy (PEG) tube insertion
	Sildenafil
	Widespread pneumatic dilation

Dashboard

Overall score: 0%

1 -

Question 21 of 204

□ □

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	Sildenafil
	Widespread pneumatic dilation

Dashboard

Overall score: **0%**

1 -

Question 22 of 204

□ □

A 40-year-old man is referred by his GP to the outpatient department with a 4 month history of tiredness and itching. He currently sleeps excessively during the daytime and reports he is having trouble concentrating at work, where he is an auditor. The itching becomes worse when he is in hotter climates and if he sleeps with a blanket over him. His past medical history includes asthma and dry eyes. His regular medications include beclometasone and antihistamine that he takes for the itching. He is not allergic to any medication and there is no family history of any known conditions. He does not smoke and drinks 5-10 units of alcohol per week.

Examination reveals mild jaundice of the sclera and scratch marks over his upper torso and arms. On examination of his abdomen, he has a slightly enlarged spleen and liver, both by 1cm.

Blood tests reveal raised bilirubin and alkaline phosphatase (ALP). Autoantibody screening reveals antimitochondrial antibodies (AMA) and antinuclear bodies (ANA) both being present.

What is the most appropriate management to help control his symptoms?

	Hydroxyzine
	Cetirizine Hydrochloride
	Ursodeoxycholic acid
	Fexofenadine
	Corticosteroid therapy

Dashboard

Overall score: 0%

1 -

□ Question 22 of 204

□ □

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Blood tests reveal raised bilirubin and alkaline phosphatase (ALP). Autoantibody screening reveals antimitochondrial antibodies (AMA) and antinuclear bodies (ANA) both being present.

What is the most appropriate management to help control his symptoms?

	Hydroxyzine
	Cetirizine Hydrochloride
	Ursodeoxycholic acid
	Fexofenadine
	Corticosteroid therapy

Dashboard

Overall score: **0%****1** -

□ Question 23 of 204



A 35-year-old woman attends gastroenterology clinic following a referral from her general practitioner. The patient is suffering from ongoing gastrointestinal symptoms following a recent diagnosis of giardiasis, despite receiving appropriate first line treatment. The patient reports a 3-month history of variable bowel habit, consisting of periods of normal motions interspersed with episodes of frequent diarrhoea. During the course of her illness, the patient reports having lost approximately 7 kg in weight. The patient denied every experiencing fever or bloody diarrhoea, but did report unusual episodes of burping with an unpleasant taste, described by the patient as tasting like 'rotten eggs'.

After her initial symptoms, the patient attended her GP, with a subsequent stool microscopy test demonstrating evidence of infection with *Giardia lamblia*. The patient had not undertaken any recent overseas travel but was employed as a nursery nurse, which was suspected of being the source of her infection. Her employer had moved the patient to a different job role, not including direct contact with children after the patient disclosed her condition.

After the diagnosis of giardiasis, the patient was treated with a 5-day course of metronidazole consistent with British National Formulary guidelines. Following treatment, the patient reported some improvement but had not gained full resolution of her symptoms.

The patient was normally fit and well and her only significant past medical history was a salpingectomy performed 5 years previously due to an ectopic pregnancy. She had never previously experienced problematic gastrointestinal symptoms. The patient took no regular medications and had no known drug allergies.

Examination of the patient's abdomen was unremarkable and she appeared to be in generally good physical condition. A urinary pregnancy test was negative.

Following her review in the clinic, a decision was made to prescribe the patient a single dose of tinidazole as a second-line treatment for giardiasis. What advice should be given to the patient alongside this treatment?

	Avoid consuming legumes for 2-6 weeks
	Avoid consuming dairy products for 2-6 weeks
	Avoid consuming eggs for 2-6 weeks
	Her ongoing symptoms are likely secondary to irritable bowel syndrome not giardiasis

Avoid consuming gluten for 2-6 weeks

Dashboard

Overall score: **0%**

1 -

□ Question 23 of 204



A 35-year-old woman attends gastroenterology clinic following a referral from her general practitioner. The patient is suffering from ongoing gastrointestinal symptoms following a recent diagnosis of giardiasis, despite receiving appropriate first line treatment. The patient reports a 3-month history of variable bowel habit, consisting of periods of normal motions interspersed with episodes of frequent diarrhoea. During the course of her illness, the patient reports having lost approximately 7 kg in weight. The patient denied every experiencing fever or bloody diarrhoea, but did report unusual episodes of burping with an unpleasant taste, described by the patient as tasting like 'rotten eggs'.

After her initial symptoms, the patient attended her GP, with a subsequent stool microscopy test demonstrating evidence of infection with *Giardia lamblia*. The patient had not undertaken any recent overseas travel but was employed as a nursery nurse, which was suspected of being the source of her infection. Her employer had moved the patient to a different job role, not including direct contact with children after the patient disclosed her condition.

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	Her ongoing symptoms are likely secondary to irritable bowel syndrome not giardiasis

Avoid consuming gluten for 2-6 weeks

Dashboard

Overall score: **0%**

1 -

□ Question 24 of 204



A 47-year-old lady is admitted to hospital with a 5-day history of abdominal pain, fever, anorexia, and malaise. Her past medical history is remarkable for depression and there is a long history of alcohol excess.

On examination, the patient is jaundiced and unwell. Her temperature is 37.9°C, her pulse is 106bpm and her blood pressure is 97/61mmHg. Her chest is clear but her abdomen is distended. There is right upper quadrant tenderness on palpation of the abdomen without overt peritonism, and evidence of shifting dullness on percussion. A hepatic bruit is also present.

Her bloods are as follows:

Hb	99 g/l	Na ⁺	128 mmol/l	Bilirubin	92 µmol/l
Platelets	113 * 10 ⁹ /l	K ⁺	4.8 mmol/l	ALP	138 u/l
WBC	11.2 * 10 ⁹ /l	Urea	7.9 mmol/l	AST	168 u/l
Neuts	8.7 * 10 ⁹ /l	Creatinine	103 µmol/l	ALT	82 u/l
Lymphs	2.3 * 10 ⁹ /l			γGT	208 u/l
INR	1.8			Albumin	28 g/l

She is started on vitamin supplementation, nutritional support, and oral prednisone.

After 7 days the patient is re-assessed. She remains significantly jaundiced and has become progressively more confused. Her repeat blood tests show:

Na ⁺	131 mmol/l	Bilirubin	127 µmol/l
K ⁺	4.2 mmol/l	ALP	172 u/l
Urea	11.2 mmol/l	ALT	76 u/l
Creatinine	134 µmol/l	γGT	168 u/l
INR	2.3	Albumin	21 g/l

Her Lille score is calculated as 0.52. How should her treatment be altered?

	Discontinue prednisolone and add etanercept
	Discontinue prednisolone and add pentoxifylline
	Continue prednisolone and add pentoxifylline
	Discontinue prednisolone and continue supportive care
	Palliate

Dashboard

Overall score: 0%

1 -

□ Question 24 of 204



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	Discontinue prednisolone and continue supportive care
	Palliate

Dashboard

Overall score: 0%

1 -

Question 25 of 204



A 59-year-old male with known liver cirrhosis presents to the acute medical unit with a raised creatinine from baseline of 100µmol/L to 180µmol/L. He denies any reduced oral fluid intake. On examination, he is well perfused. There are no signs of dehydration. His abdomen is distended and shifting dullness is positive.

CRP	10mg/L
-----	--------

Hepatorenal syndrome is suspected. Which of the following is the first line treatment?

	Bolus of normal saline fluid
	Bolus of Hartmann's solution
	Terlipressin
	Terlipressin with albumin infusion
	Intravenous antibiotics

Dashboard

Overall score: 0%
1 -

Question 25 of 204

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	Terlipressin
	Terlipressin with albumin infusion
	Intravenous antibiotics

Dashboard
Overall score: 0%
1 -

Question 26 of 204

□ □

A 25-year-old gentleman presents with bloody diarrhoea, fevers and lower abdominal pain. An initial colonoscopy shows extensive ulceration in his distal colon with one mild active inflammation. His dad developed colorectal cancer at the age of 52. His gastroenterologist discusses the necessity of colonic surveillance. What is the risk that he will develop colorectal cancer?

	Low risk (offer colonoscopy at 5 years)
	High risk (offer colonoscopy at 1 year)
	Intermediate risk (offer colonoscopy at 3 years)
	Too early to ascertain
	No risk

Dashboard

Overall score: 0%

1 -

□ Question 26 of 204

□ □

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	Intermediate risk (offer colonoscopy at 3 years)
	Too early to ascertain
	No risk

Dashboard

Overall score: **0%****1** -

□ Question 27 of 204

□ □

A 48-year-old female with a history of Crohn's disease is admitted to hospital with abdominal pain and distension. This has been getting progressively worse over the past 24 hours.

Her Crohn's disease is now well controlled with azathioprine. In the past she has had a number of abdominal operations to treat complications including an ileal resection.

An abdominal film is requested:



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What is the most likely diagnosis?

	Toxic megacolon
	Vesicocolonic fistula
	Faecal loading
	Intussusception
	Caecal volvulus

Dashboard

Overall score: **0%**

1 -

□ Question 27 of 204

□ □

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	Toxic megacolon
	Vesicocolonic fistula
	Faecal loading
	Intussusception
	Caecal volvulus

Dashboard

Overall score: **0%**

1 -

□ Question 28 of 204

□ □

A 35-year-old female who has recently emigrated from Pakistan presents is investigated for abdominal pain and diarrhoea.

Around 4 months ago she was investigated in Pakistan for an episode of dyspnoea, wheezing, fever and malaise. No cause was found at the time and she improved after 3 weeks.

A barium enema is performed:



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What is the most likely diagnosis?

	Ascariasis
	Enterobiasis
	Giardiasis
	Carcinoid syndrome
	Ulcerative colitis

Dashboard

Overall score: 0%

1 -

□ Question 28 of 204

□ □

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	Carcinoid syndrome
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Dashboard

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1 -

□ Question 28 of 204

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© Image used on license from Radiopaedia



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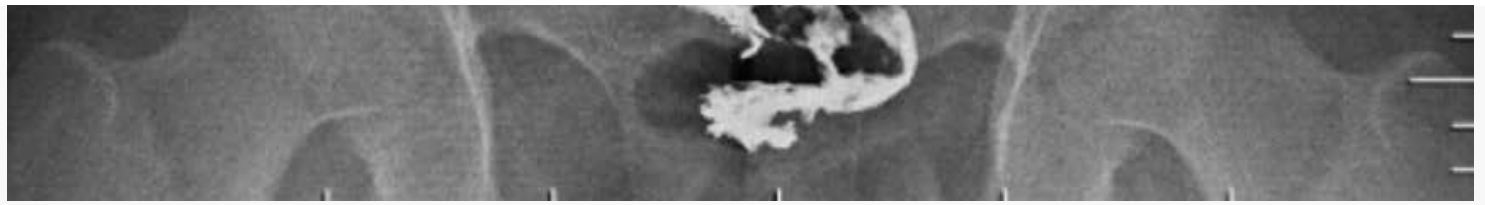
	Ascariasis
	Enterobiasis
	Giardiasis
	Carcinoid syndrome
	Ulcerative colitis

Dashboard

Overall score: 0%

1 -





Question 29 of 204

□ □

A 60-year-old male presents with one week history of non-bloody diarrhoea and mild abdominal pain. In average, diarrhoea occurs six times a day. Two weeks ago, he is admitted to the hospital for treatment of community acquired pneumonia . His temperature is 38°C, blood pressure is 130/66 mmHg, heart rate is 90/min, oxygen saturation is 98% on air and respiratory rate is 17/min. On examination, he is tender on palpation of the left iliac fossa. There are no signs of peritonism and bowel sound is normal.

CRP	40
WBC	13

Which of the following drug should be started while awaiting for the stool culture?

	Oral metronidazole
	Oral ciprofloxacin
	Oral vancomycin
	Intravenous vancomycin
	Intravenous metronidazole

Dashboard

Overall score: 0%

1 -

Question 29 of 204

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	Oral ciprofloxacin
	Oral vancomycin
	Intravenous vancomycin
	Intravenous metronidazole

Dashboard

Overall score: **0%**

1 -

Question 30 of 204

□ □

A 26-year-old pregnant woman is seen on the acute medical unit. She is 24 weeks pregnant with her first child and has been admitted by her GP after feeling generally unwell with 'flu like symptoms and developing jaundiced sclera. Her stay in Bangladesh lasted 2 weeks during which time she visited family. Prior to travelling she was vaccinated against hepatitis A.

On examination her sclera are visibly jaundiced. Blood pressure is 108/60 mmHg, temperature 38.1°C and pulse 96/min. She is slightly tender in the right upper quadrant of the abdomen. Bloods show the following:

Bilirubin	72µmol/l
ALP	252 u/l
ALT	342 u/l
γGT	286 u/l
Albumin	38 g/l
CRP	154 mg/l

What is the most likely diagnosis?

	Dengue fever
	Hepatitis E
	Hepatitis A
	Intrahepatic cholestasis of pregnancy
	Acute fatty liver

Overall score: **0%**

1 -

Question 30 of 204

□ □

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	Dengue fever
	Hepatitis E
	Hepatitis A
	Intrahepatic cholestasis of pregnancy
	Acute fatty liver

Dashboard

Overall score: **0%**

1 -

□ Question 31 of 204



A 26-year-old man comes to the outpatient clinic. He describes a 2-month history of weight loss, cramping lower abdominal pain with increasing stool frequency. His stools often have blood and mucus in them and occasionally he passes pure blood with no faeces. He is normally fit and well and takes no regular medications. On examination, he has a low-grade fever at 37.5 and pale. His abdomen is soft but tender across the lower half. His bloods checked by the GP earlier in the week are as follows:

Hb	110 g/l
Platelets	400 * 10 ⁹ /l
WBC	12.0 * 10 ⁹ /l
Neuts	9.0 * 10 ⁹ /l

Na ⁺	139 mmol/l
K ⁺	4.5 mmol/l
Urea	4.0 mmol/l
Creatinine	89 µmol/l
CRP	60 mg/L (<10)

Bilirubin	8 µmol/l
ALP	78 u/l
ALT	34 u/l
Albumin	36 g/l

Stool cultures sent by the GP are negative.

He is admitted the same day for a flexible sigmoidoscopy which shows mild colitis extending to the mid-descending colon. Biopsies are taken which show mild colitis but of indeterminate cause.

He is transferred to the ward and started on IV hydrocortisone 100mg QDS and he clinically improves and is started on regular mesalazine. He is found to be positive for anti-Saccharomyces cerevisiae antibodies but negative for pANCA. What is the likely cause of his colitis?

	Ulcerative colitis
	Microscopic colitis
	<i>C.difficile</i> infection
	Behcet's disease
	Crohn's disease

Dashboard

Overall score: 0%

1 -

□ Question 31 of 204



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	Microscopic colitis
	<i>C.difficile</i> infection
	Behcet's disease
	Crohn's disease

Dashboard

Overall score: 0%

1 -

Question 31 of 204

A 26-year-old man comes to the hospital with abdominal pain with increased frequency of defecation. He passes pure blood with no faeces. His past medical history is unremarkable. His blood test results from earlier in the week are as follows:

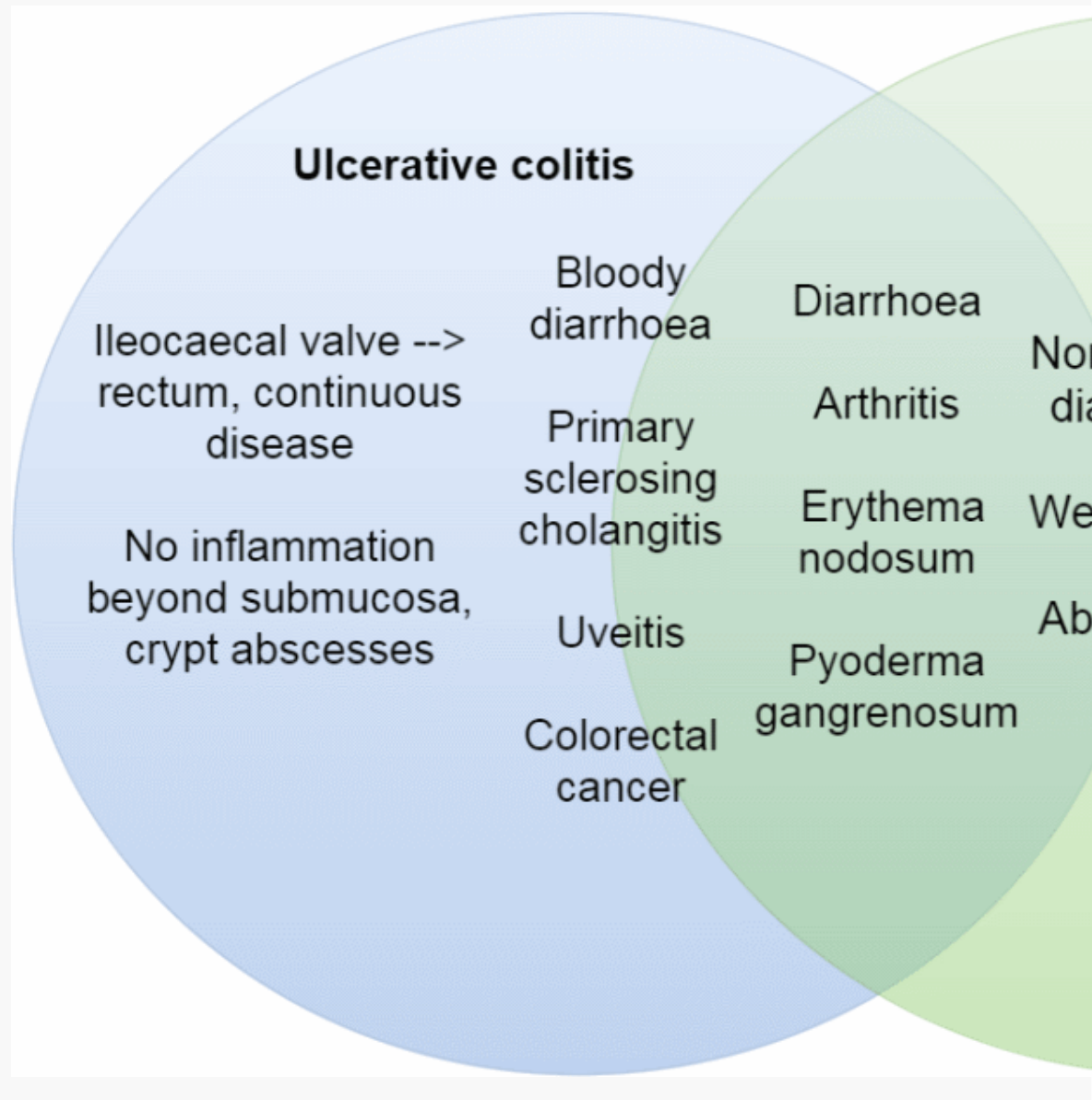
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	Ulcerative colitis
	Microscopic colitis
	<i>C.difficile</i> infection
	Behcet's disease
	Crohn's disease

Dashboard

Overall score: 0%

1 -

□ Question 32 of 204



A 37-year-old woman who is 32 weeks pregnant presents with malaise, headaches and vomiting. She is admitted to the obstetrics ward after a routine blood pressure measurement was 190/95mmHg. Examination reveals right upper quadrant abdominal pain and brisk tendon reflexes. The following blood tests are shown:

Hb	85 g/l
WBC	$6 \times 10^9/l$
Platelets	$89 \times 10^9/l$

Bilirubin	2.8 $\mu\text{mol/l}$
ALP	215 u/l
ALT	260 u/l
γGT	72 u/l
LDH	846 u/l

A peripheral blood film is also taken which shows polychromasia and schistocytes.

What is the most likely diagnosis?

	Obstetric cholestasis
	HELLP syndrome
	Eclampsia
	Gestational hypertension
	Acute viral hepatitis

Dashboard

Overall score: **0%**

1 -

□ Question 32 of 204



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	Obstetric cholestasis
	HELLP syndrome
	Eclampsia
	Gestational hypertension
	Acute viral hepatitis

Dashboard

Overall score: **0%**

1 -

□ Question 33 of 204



An 80 year-old man presents with a 3 month history of generalised abdominal pain and a change in bowel habit. The abdominal pain is colicky in nature and does not radiate anywhere. He also reports increasing distension of his abdomen and 2 episodes of blood in the rectum several weeks ago. He has recently undergone colonoscopy, which did not reveal anything abnormal. His past medical history includes diabetes type 2 and a heart attack two years ago, for which he needed three stents. His mother died of a stroke when he was 60 and his father died of a heart attack at the age of 55. His current medications include ramipril, aspirin, atenolol, atorvastatin and metformin. He has a 40 year pack history and drinks on average 15 units per day.

Blood tests reveal:

Hb	12.0 g/dL
Mean corpuscular volume (MCV)	80 fl
Platelets	$198 \times 10^9/l$
WBC	$13.1 \times 10^9/l$
Na ⁺	132 mmol/l
K ⁺	5.1 mmol/l
Urea	9.0 mmol/l
Creatinine	145 μ mol/l

Other than an abdominal x-ray, what is the most appropriate investigation?

	Contrast-enhanced computed tomography (CT) of the abdomen with angiography
	Colonoscopy
	Endoscopy
	MRI of the abdomen

	Angiography
--	-------------

Dashboard

Overall score: 0%

1 -

□ Question 33 of 204



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	Angiography
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Dashboard

Overall score: **0%**

1 -

Question 34 of 204



A 32-year-old man presents with loose stools or diarrhoea on all occasions for almost a year now, associated with intermittent, mild, generalised, crampy abdominal pain that has no obvious triggers. He has lost three stone (19 kilogrammes) in weight over the year despite not trying to. For nearly 10 years he has had episodes of arthralgia and fever which he has never thought to consult about. He once travelled to Gambia on his gap-year aged 18 and recalls several mosquito bites. He took full malaria prophylaxis as directed for the trip. His partner notices that as of the last 2-3 years he has had lapses in memory and is performing badly in his day-to-day tasks at work as a stoke broker such that he has now been made redundant. This has encouraged him to consult. On clinical examination, you find an emaciated gentleman with mild polyarthralgia and an ataxic gait. His Mini-Mental State Examination (MMSE) score is 22/30. Below are some of his blood test results:

Hb	90 g/l
Platelets	$300 \times 10^9/l$
WBC	$10 \times 10^9/l$
MCV	70 fL
Ferritin	8 micrograms/l

Na ⁺	140 mmol/l
K ⁺	2.9 mmol/l
Urea	11 mmol/l
Creatinine	110 μ mol/l

Calcium	1.9 mmol/l
Magnesium	0.5 mmol/l
Rheumatoid factor	negative

You organise a small bowel biopsy. What abnormality is the histology likely to show?

	Increased increased intraepithelial lymphocytes with villous atrophy and crypt Hyperplasia
	Deposition of macrophages containing PAS-positive granules within villi
	Transmural inflammation with multiple lymphoid aggregates
	Adenocarcinoma
	Carcinoid tumour cells with trabecular cell arrangements

Dashboard

Overall score: 0%

1 -

Question 34 of 204



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Rheumatoid factor	negative

You organise a small bowel biopsy. What abnormality is the histology likely to show?

	Increased increased intraepithelial lymphocytes with villous atrophy and crypt Hyperplasia
	Deposition of macrophages containing PAS-positive granules within villi
	Transmural inflammation with multiple lymphoid aggregates
	Adenocarcinoma
	Carcinoid tumour cells with trabecular cell arrangements

Dashboard

Overall score: 0%

1 -

□ Question 35 of 204



A 75-year-old man was admitted to hospital with a three-day history of right sided abdominal pain and vomiting. He has a history of ischaemic heart disease, chronic obstructive pulmonary disease and peripheral vascular disease.

On examination, he appears unwell. His temperature is 38.5°C, heart rate is 120 beats per minute, respiratory rate is 24 breaths per minute and blood pressure is 90/60 mmHg. He appears jaundiced. Examination of his abdomen reveals tenderness over the right upper quadrant on palpation.

Blood tests show:

Hb	115 g/l	Na ⁺	146 mmol/l	Bilirubin	225 µmol/l
Platelets	650 * 10 ⁹ /l	K ⁺	5.8 mmol/l	ALP	894 u/l
WBC	24.3 * 10 ⁹ /l	Urea	10.5 mmol/l	ALT	160 u/l
Neuts	20.5 * 10 ⁹ /l	Creatinine	190 µmol/l	γGT	279 u/l
CRP	348 mg/L			Albumin	27 g/l

An urgent ultrasound of his abdomen reveals sludge in his gallbladder and a dilated common bile duct at 13mm. His spleen and kidneys appear normal. He was fluid resuscitated and started on piperacillin-tazobactam after blood cultures were taken. After 6 hours of treatment, his blood pressure improves to 130/70 mmHg, his heart rate has decreased to 95 beats per minute and he is passing 50 millilitres of urine an hour.

What is the next appropriate management for this patient?

	Watch and wait
	Endoscopic retrograde cholangiopancreatography
	Percutaneous transhepatic cholangiogram
	Urgent cholecystectomy

	Refer to intensive care
--	-------------------------

Dashboard

Overall score: **0%**

1 -

□ Question 35 of 204



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Dashboard

Overall score: **0%**
1 -

□ Question 36 of 204

□ □

A 70-year-old woman is investigated for heartburn. For the past 3 months she has experienced persistent heartburn after each meal. This was improved by a 4 week course of proton pump inhibitors but her symptoms returned shortly after stopping them. Clinical examination of her abdomen, hands and neck is unremarkable.

A full blood count shows the following:

Hb	12.6 g/dl
Platelets	$331 \times 10^9/l$
WBC	$6.8 \times 10^9/l$

A barium swallow is arranged:



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What is the most likely diagnosis?

	Barrett's oesophagus
	Diffuse oesophageal spasm (corkscrew oesophagus)
	Achalasia
	Oesophageal web
	Oesophageal cancer

Overall score: **0%**

1 -

□ Question 36 of 204

□ □

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Dashboard

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1 -

□ Question 36 of 204

□ □

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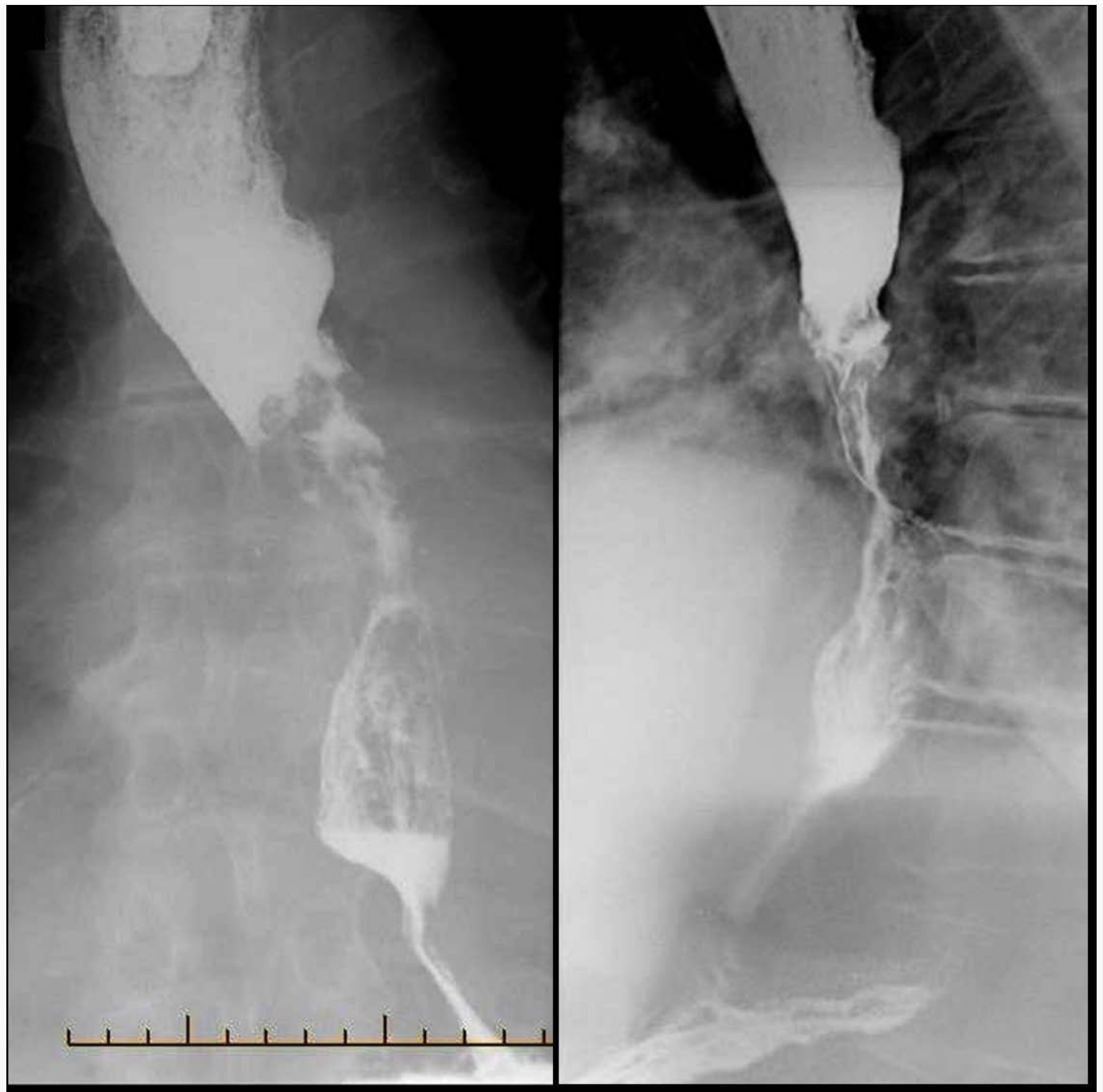
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□ Question 36 of 204

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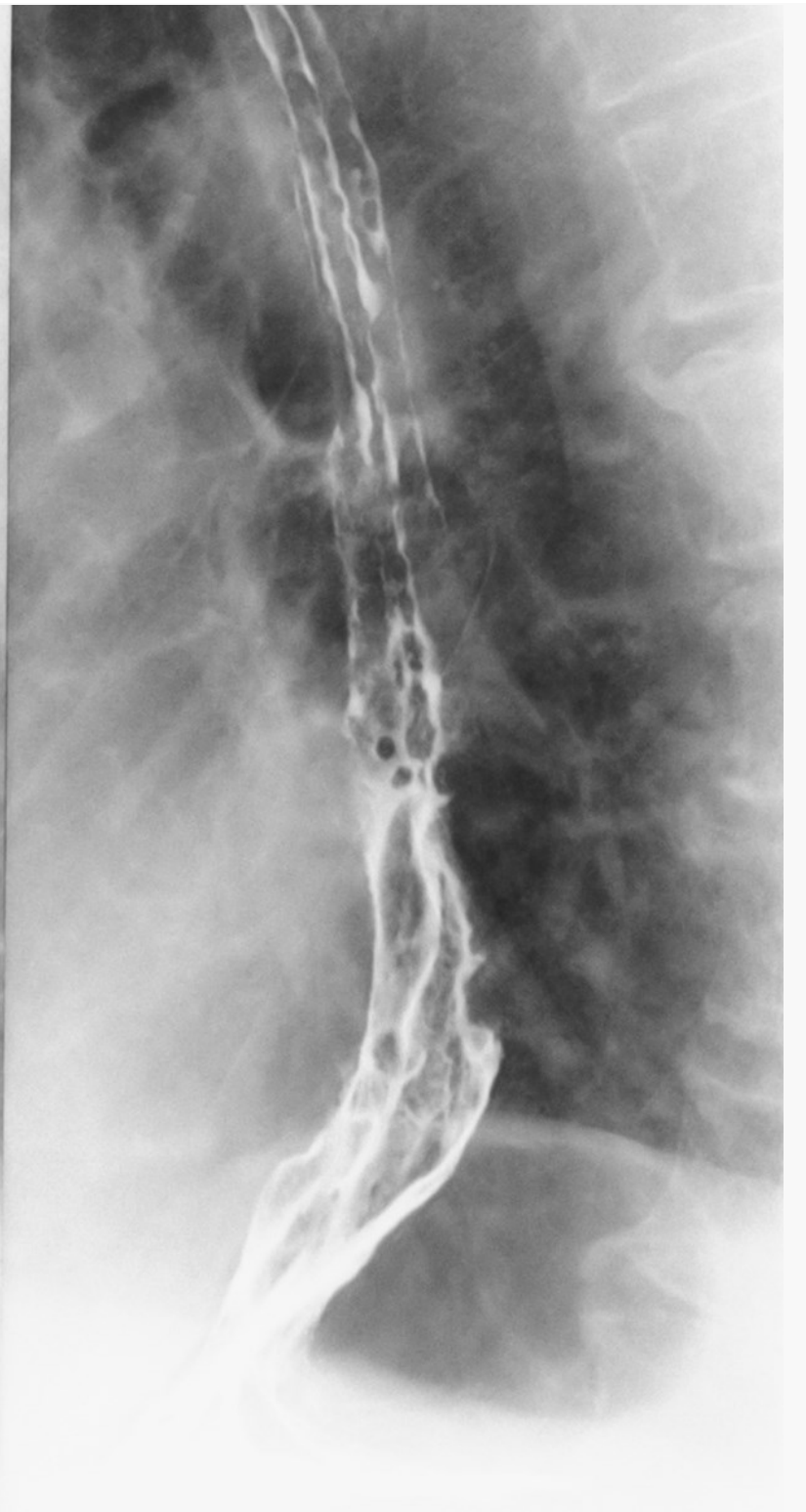
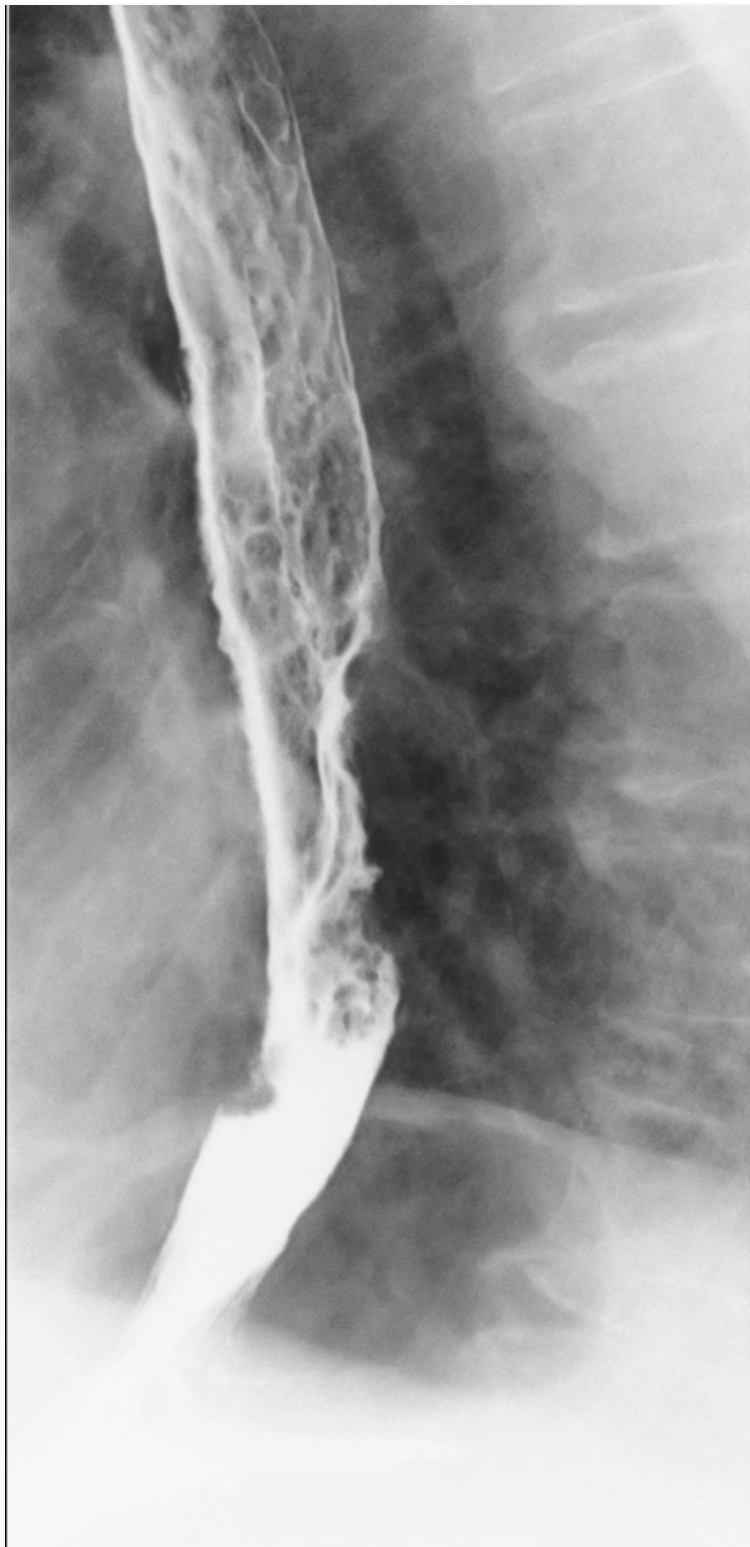
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	Oesophageal cancer

Dashboard

Overall score: **0%**

1 -



Question 37 of 204

□ □

A 58 year-old woman presents to hospital after 2 episodes of vomiting up blood. It began 2 hours prior to presenting at hospital and the patient was at work as a saleswoman at the time. She has a past history of a duodenal ulcer and also suffers from irritable bowel syndrome, hypertension and hypercholesterolaemia. Her regular medication includes simvastatin and ramipril. She is admitted under the gastroenterology team and undergoes fluid resuscitation and successful sclerotherapy. The next morning, the patient vomits up a moderate amount of blood.

What is the most appropriate management?

	Intravenous omeprazole
	Conservative management
	Intravenous somatostatin
	Repeat sclerotherapy endoscopically
	Refer to a general surgeon for open surgery

Dashboard

Overall score: 0%

1 -

□ Question 37 of 204

□ □

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	Repeat sclerotherapy endoscopically
	Refer to a general surgeon for open surgery

Dashboard

Overall score: **0%**

1 -

□ Question 38 of 204



A 38 year-old nulliparous woman, who is at 35 weeks gestation, presents with a 10-hour history of fatigues, nausea and vomiting. She has not eaten for the past 24 hours and says that she feels a little dizzy. She describes no blood in her vomit and has had no recent changes in her bowel habit. She has no past medical history of note and she does not currently take any regular medication. She has no family history of note and does not smoke or drink any alcohol.

On examination she appears to be very anxious and abdominal exam reveals right upper quadrant and epigastric pain on deep palpation. There is no organomegaly and bowel sounds are present. The baby is moving normal.

She has a temperature of 37.5°C, heart rate of 85 beats per minute, blood pressure of 135/80mmHg, oxygen saturation of 99% and a respiratory rate of 18 breaths per minute.

Blood tests reveal:

Hb	10.5 g/dL
Platelets	82 * 10 ⁹ /l
WBC	12.9 * 10 ⁹ /l
Na ⁺	134 mmol/l
K ⁺	3.9 mmol/l
Urea	7.2 mmol/l
Creatinine	95 µmol/l
CRP	20 mg/l
ESR	8 mm/hr
Bilirubin	90 µmol/l
ALP	140 u/l
ALT	431 u/l
γGT	45 u/l

Albumin	30 g/l
Prothrombin time (PT)	23 seconds

What is the most likely diagnosis?

	Ascending cholangitis
	Intrahepatic cholestasis of pregnancy
	Fatty liver of pregnancy
	Infectious gastroenteritis
	Hyperemesis gravidarum

Dashboard

Overall score: 0%

1 -

□ Question 38 of 204



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Dashboard

Overall score: **0%**

1 -

□ Question 39 of 204



A 38 year-old man, who has a job as a pastry chef is referred by his GP with pale, offensive stools and weight loss of 5 kg over the last two months. He has a past medical history of episodic acid reflux disease for which he was recently prescribed omeprazole. He drinks several glasses of wine a day and has a five year pack history.

Blood tests reveal:

Hb	9.9 g/dL
Mean corpuscular volume (MCV)	115 fL
Platelets	$280 \times 10^9/L$
WBC	$7.1 \times 10^9/L$
Na ⁺	136 mmol/L
K ⁺	4.0 mmol/L
Urea	3.2 mmol/L
Creatinine	52 $\mu\text{mol/L}$
Bilirubin	15 $\mu\text{mol/L}$
ALP	140 u/L
ALT	50 u/L
γGT	210 u/L
Albumin	39 g/L
Vitamin B12	120 ng/L
Faecal elastase	98 g/g (normal > 200)

What is the most appropriate next investigation?

--	--

	Abdominal ultrasound scan
	Liver biopsy
	Magnetic resonance cholangiopancreatography (MRCP)
	Colonoscopy
	Endoscopic retrograde cholangiopancreatography (ERCP)

Dashboard

Overall score: 0%

1 -

□ Question 39 of 204



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Dashboard

Overall score: **0%**

1 -

□ Question 39 of 204

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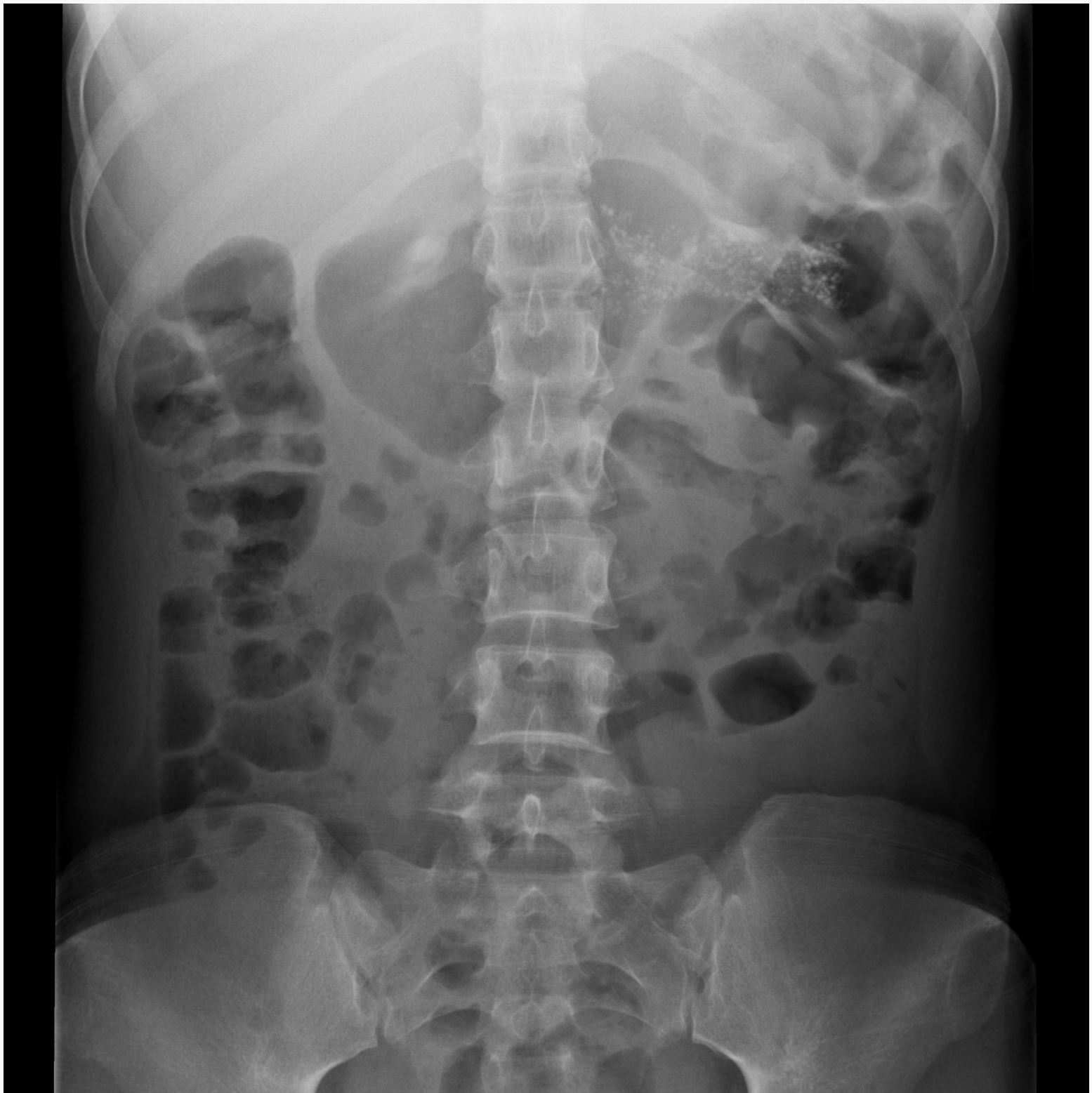
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	Abdominal ultrasound scan
	Liver biopsy
	Magnetic resonance cholangiopancreatography (MRCP)
	Colonoscopy
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Dashboard

Overall score: **0%**

1 -



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SUPINE



□ Question 39 of 204

□ □

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	Abdominal ultrasound scan
	Liver biopsy
	Magnetic resonance cholangiopancreatography (MRCP)
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Dashboard

Overall score: **0%**

1 -



□ Question 40 of 204

□ □

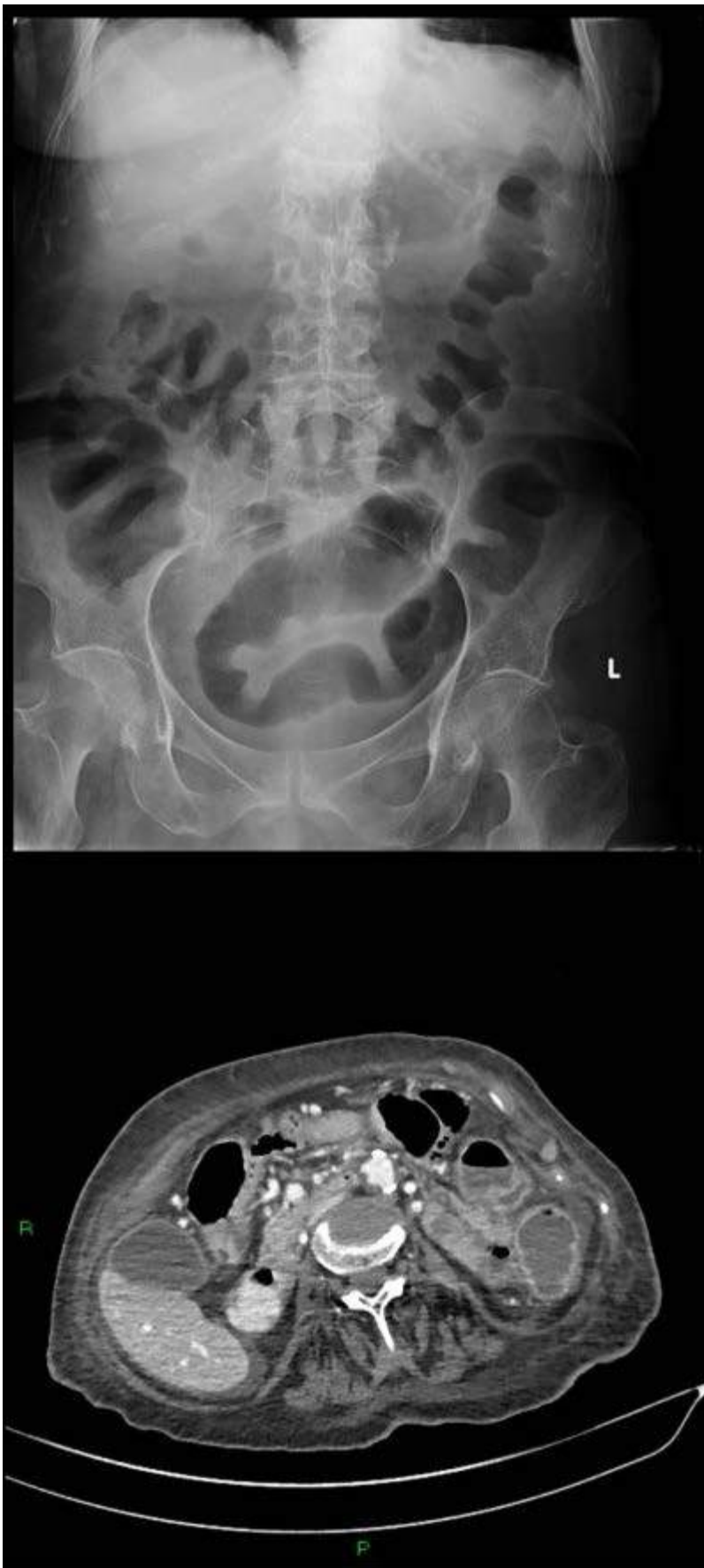
A 84-year-old lady is admitted to the Emergency Department from her nursing home with diarrhoea, abdominal pain and fever. Her symptoms started around 2 days ago and have been getting progressively worse. She is now opening her bowels every other hour and is complaining of severe 'cramp' in her lower abdomen. Her past medical history includes hypertension, ischaemic heart disease, hypothyroidism and recent treatment for suspected pyelonephritis.

On examination she is diffusely tender across the lower abdomen. Her pulse is 90/min, blood pressure 100/60 mmHg and temperature 37.4°C.

Bloods show the following:

Hb	11.1 g/dl	Na ⁺	144 mmol/l
Platelets	365 * 10 ⁹ /l	K ⁺	4.6 mmol/l
WBC	25.2 * 10 ⁹ /l	Urea	10.6 mmol/l
		Creatinine	99 µmol/l
		CRP	86 mg/l

The surgeons request an abdominal film and later a CT abdomen:



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What is the most likely diagnosis?

	Perinephric abscess
	Ischaemic colitis
	Acute diverticulitis
	Metastatic colorectal cancer
	<i>Clostridium difficile</i> colitis

Dashboard

Overall score: 0%

1 -

□ Question 40 of 204

□ □

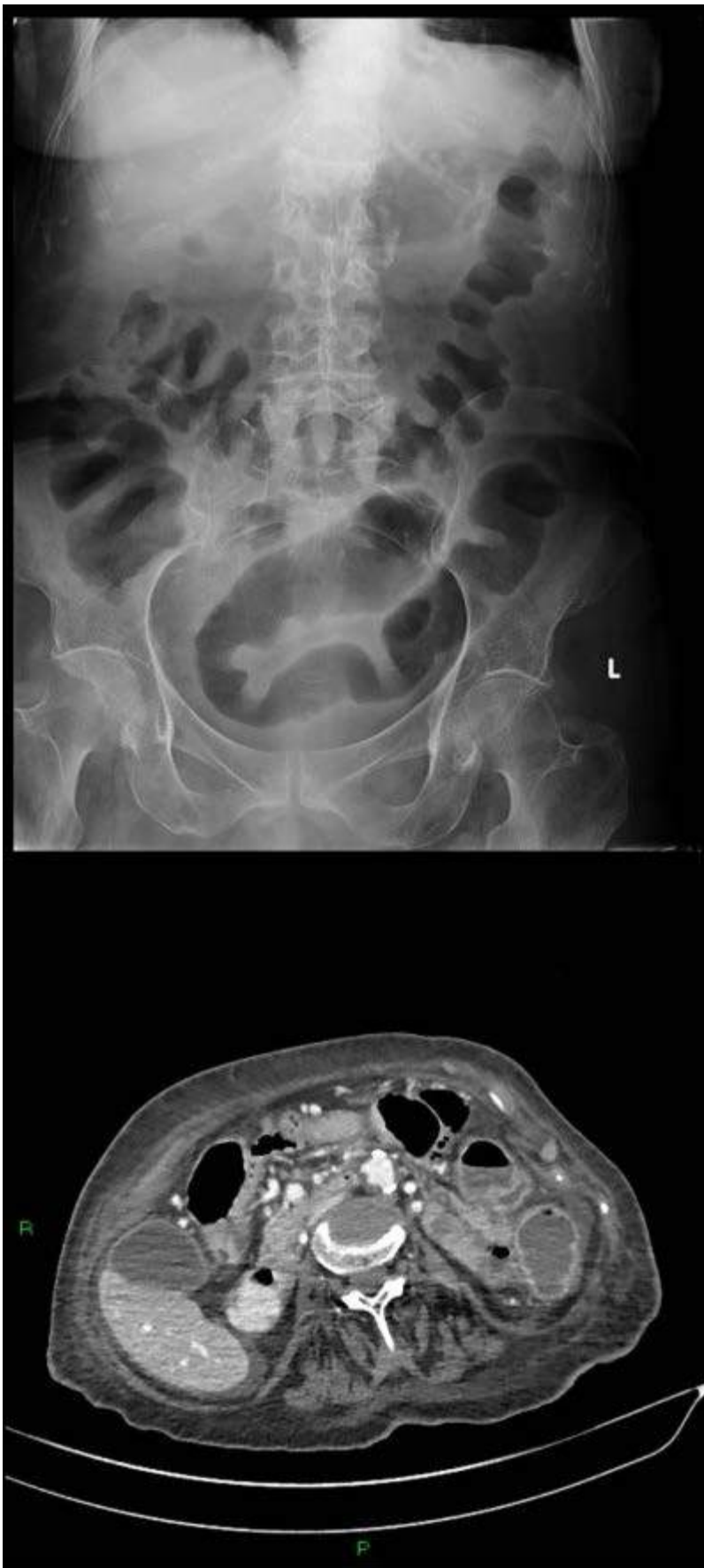
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Dashboard

Overall score: **0%**
1 -

Question 41 of 204

□ □

A 25-year-old man who is normally fit and well presents with a 2-week history of crampy abdominal pain and bloody diarrhoea. A colonoscopy shows erythema and oedema in the distal colon and evidence of proctitis. He is started on mesalazine. What blood test(s) must be done prior to its commencement?

	Renal function and full blood count
	Thiopurine methyltransferase activity
	Amylase
	Hepatitis screen
	Liver function test and full blood count

Dashboard

Overall score: 0%

1 -

Question 41 of 204

□ □

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	Hepatitis screen
	Liver function test and full blood count

Dashboard

Overall score: **0%**

1 -

□ Question 42 of 204



A 19-year-old man presented to the Emergency Department with frequent, bloody diarrhoea. He reported increasing stool frequency over the past two weeks and at presentation was opening his bowels 20 times per day including nocturnal episodes. He also reported feeling increasingly tired and lethargy with some cramping abdominal pains. The patient had no previous past medical history and took no regular medications. Past medical history was unremarkable and the patient took no regular medications. He worked as a trainee plumber, drank alcohol moderately and did not smoke.

Examination demonstrated some diffuse lower abdominal tenderness but with no signs of peritonism. Blood tests at presentation demonstrated anaemia (Hb 105 g / dL) and raised inflammatory markers (ESR 85 mm / h). Initial impression was of an acute severe colitis and treatment with intravenous hydrocortisone and oral 5-aminosalicylates was initiated. A limited flexible sigmoidoscopy demonstrated severe proctitis with inflammation extending beyond the limits of the study at the mid-sigmoid colon. Plain film imaging of chest and abdomen was unremarkable.

A summary of the patients observations and investigations at day 4 from presentation is given below.

- Stool chart: 12 large volume bloody type 7 stools over previous 24 hours
- Blood pressure: 105 / 67 mmHg
- Heart rate: 98 beats / min
- Respiratory rate: 19 breaths / min
- Temperature: 36.5°C

Haemoglobin	99 g / dL
White cell count	15 * 10 ⁹ /l
Neutrophils	13.2 * 10 ⁹ /l
Platelets	421 * 10 ⁹ /l
Urea	6.8 mmol / L
Creatinine	87 micromol / L
Erythrocyte sedimentation rate	67 mm / h

What is the next step in management?

	Infliximab
	Azathioprine
	Colectomy
	Add topical 5-aminosalicylates
	Rituximab

Dashboard

Overall score: **0%**

1 -

□ Question 42 of 204



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Dashboard

Overall score: **0%**
1 -

Question 43 of 204

□ □

A 23 year old female presents with a 4 month history of diarrhoea with pale stools, and 'tingling' sensations in her fingers. There are intermittent episodes of mild 'tummy pain' but she is particularly aware that she no longer fits into dresses she wore 18 months ago. She has noticed a few mouth ulcers during this time but is not particularly distressed by them. She denies fevers or bloody stools. She has a family history of Crohns disease, with her mother diagnosed with the condition in her 30s. A friend encouraged her to abstain from wheats, ryes and oats, which she remembers to have helped. Over the past 6 months, she reports significant stresses on her university masters course and personal problems with her boyfriend. Her only travel history is a recent trip to India 3 months ago.

She had recently seen her GP for these symptoms: her anti-endomysial antibody however, was negative on serological testing and an initial colonoscopy was non-diagnostic due to poor bowel preparation. Unfortunately, her sample for serum tissue transglutaminase antibody was lost. On examination, her abdomen is soft and non-tender, she appears pale and BMI = 14.7. She awaits a second colonoscopy. What is the most likely diagnosis?

	Crohns disease
	Irritable bowel syndrome
	Coeliac disease
	Ulcerative colitis
	Tropical sprue

Dashboard

Overall score: 0%

1 -

□ Question 43 of 204

□ □

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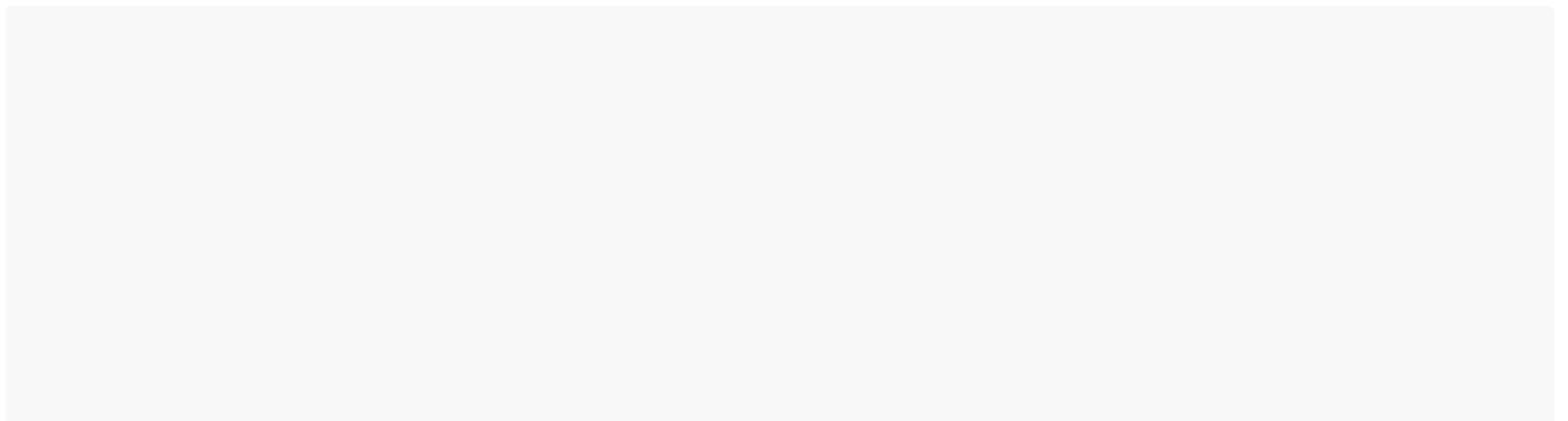
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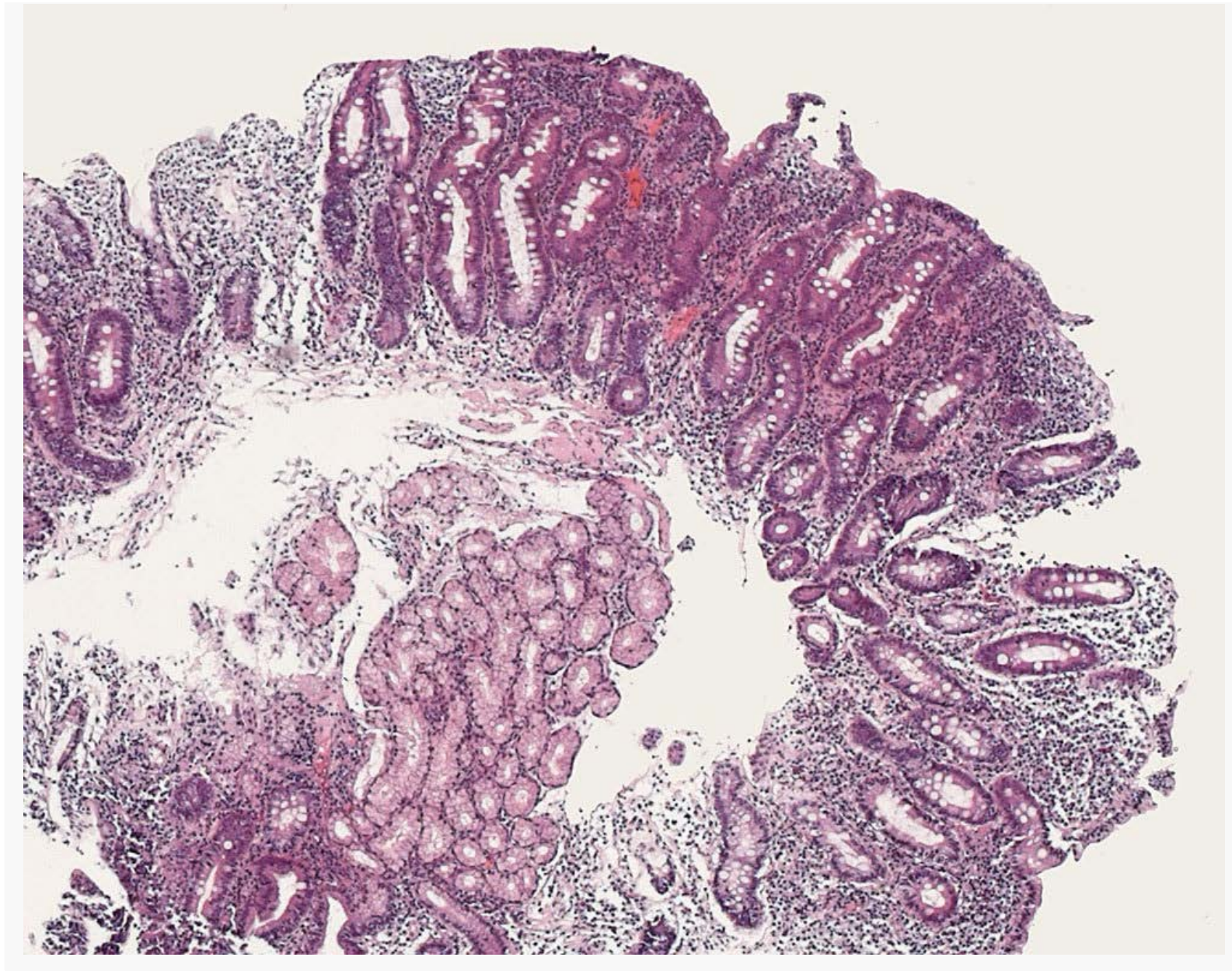
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	Ulcerative colitis
	Tropical sprue

Dashboard

Overall score: 0%

1 -





Question 43 of 204

A 23 year old female presents with pain in her fingers. There are intermittent episodes of swelling of the fingers. She wears dresses she wore 18 months ago. She denies fevers, weight loss, or night sweats. The condition in her 30s. A family history of autoimmune disease helped. Over the past 6 months, she has been seeing a therapist with her boyfriend. Her only

She had recently seen her (testing and an initial colonoscopy tissue transglutaminase anti BMI = 14.7. She awaits a se



	Crohn's disease
	Irritable bowel syndrome
	Coeliac disease
	Ulcerative colitis
	Tropical sprue

Dashboard

Overall score: **0%**

1 -

□ Question 44 of 204



A 36-year-old man was diagnosed with ulcerative colitis 10 years previously. At his initial presentation a course of intravenous hydrocortisone was required to achieve remission. Subsequently, the patient's disease has been fairly well controlled with azathioprine, although occasional courses of oral steroids had been required to treat minor flares. The patient had experienced no extra-gastrointestinal manifestations of his disease and had no other past-medical history. Family history included the patient's father being diagnosed with sigmoid adenocarcinoma at the age of 67 years.

The patient was referred for routine screening colonoscopy. This demonstrated extensive colitis extending to the hepatic flexure but no active endoscopic inflammation or post-inflammatory polyps. Mapping biopsies were taken with no evidence of histological inflammation.

Prior to the procedure the patient stated his concern regarding his future risk of colorectal cancer due to his ulcerative colitis and expressed his willingness to undergo surveillance colonoscopy at the recommended time interval.

In what time interval should the patient undergo his next surveillance colonoscopy?

<input type="radio"/>	1 year
<input type="radio"/>	2 years
<input type="radio"/>	3 years
<input type="radio"/>	5 years
<input type="radio"/>	10 years

Dashboard

Overall score: 0%

1 -

Question 44 of 204

□ □

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Prior to the procedure the patient stated his concern regarding his future risk of colorectal cancer due to his ulcerative colitis and expressed his willingness to undergo surveillance colonoscopy at the recommended time interval.

In what time interval should the patient undergo his next surveillance colonoscopy?

	1 year
	2 years
	3 years
	5 years
	10 years

Dashboard

Overall score: **0%**

1 -

□ Question 45 of 204

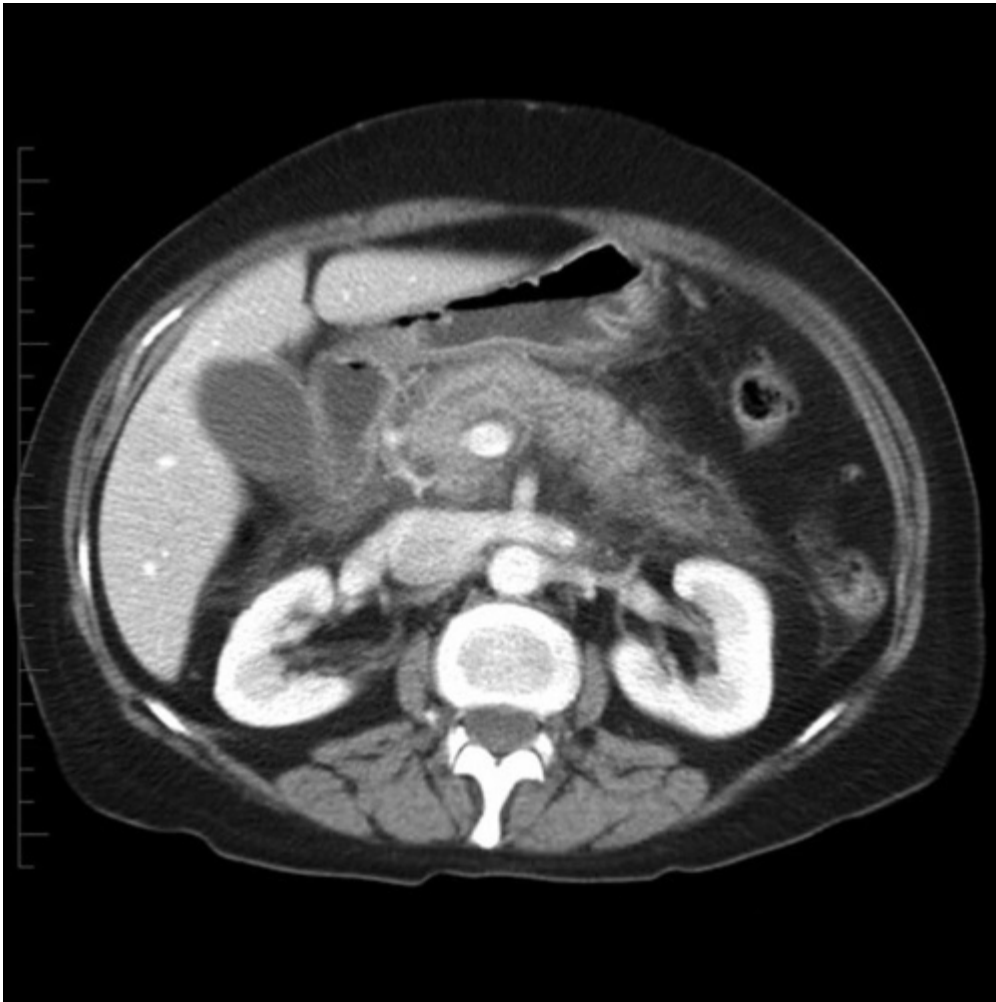
□ □

A 54-year-old woman who has recently been diagnosed with autoimmune hepatitis presents to the Emergency Department with central abdominal pain. This has been getting worse for the past 48 hours and is now 8/10 in terms of severity.

On examination she is tender in the epigastrium.

For the past 3 weeks she has been taking prednisolone 40mg od. Her long term medication includes amlodipine and lisinopril for hypertension. She is a non-smoker and drinks 10 units of alcohol/week.

A CT abdomen is requested:



© Image used on license from Radiopaedia



What is the most likely diagnosis?

	Acute cholecystitis
	Perforated duodenal ulcer
	Hepatocellular carcinoma
	Psoas abscess
	Acute pancreatitis

Dashboard

Overall score: 0%

1 -

□ Question 45 of 204

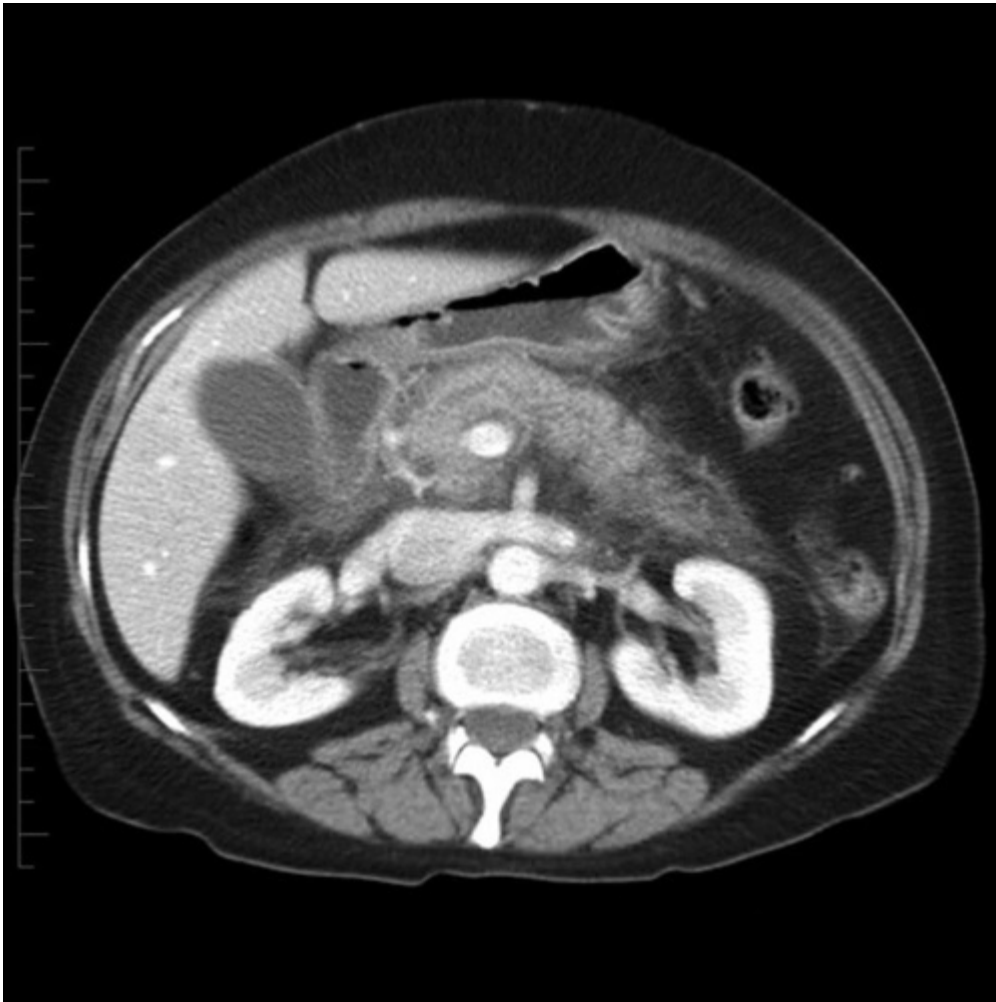
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© Image used on license from Radiopaedia



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Dashboard

Overall score: **0%**

1 -

□ Question 45 of 204

□ □

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© Image used on license from Radiopaedia



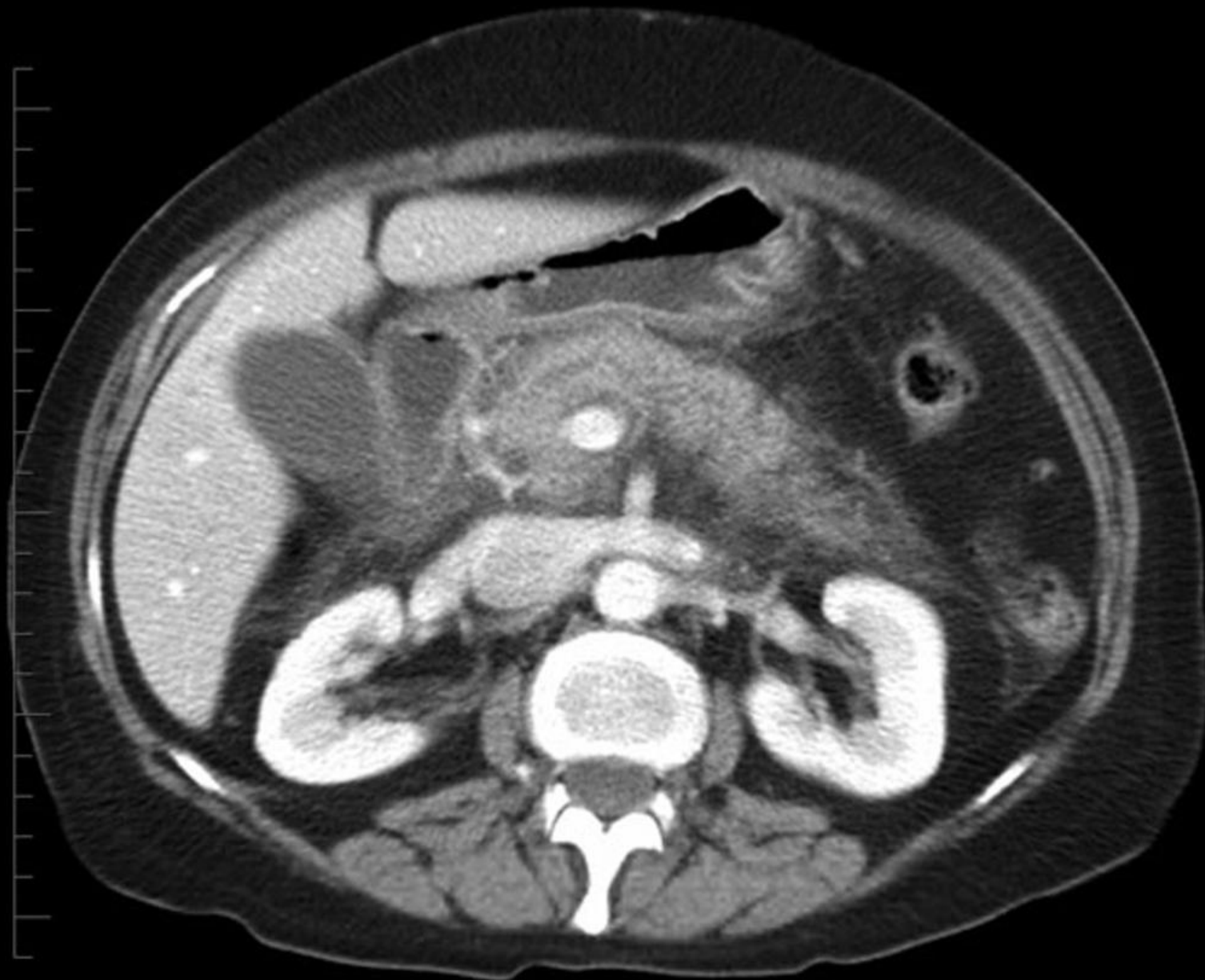
What is the most likely diagnosis?

	Acute cholecystitis
	Perforated duodenal ulcer
	Hepatocellular carcinoma
	Psoas abscess
	Acute pancreatitis

Dashboard

Overall score: 0%

1 -



□ Question 46 of 204



A 60-year-old lady on the gastroenterology ward develops an acute episode of haematemesis in the night, the nurse who witnessed the event described the bleed as about one cupful of bright red blood. The patient has a known history of alcohol abuse, drinking 2 bottles of wine a day, and has a past medical history of ascites secondary to alcoholic liver cirrhosis, hypertension and type two diabetes mellitus. She was admitted initially for an ascitic drain earlier in the afternoon which has not occurred due to staff shortages in the medical team.

On examination she was afebrile, her heart rate was 110bpm, blood pressure was 104/81mmHg, respiratory rate of 20 breaths per minute and had an oxygen saturation of 97% on air. Cardiovascular and respiratory examination was unremarkable. Abdominal examination revealed a tensely distended abdomen with shifting dullness present. There are marked distended superficial veins on her abdominal surface. There was mild epigastric tenderness, and on rectal examination, there was a small amount of tarry black stool. She was not actively vomiting during the examination.

Intravenous fluid resuscitation was already started by the house officer on call, and blood samples including a cross-match were sent. The gastroenterology registrar on call has been informed and was arranging an emergency endoscopy for the patient.

Her previous blood results and a current venous blood gas (VBG) results are shown:

Blood results (earlier in the afternoon)

Na ⁺	134 mmol/l
K ⁺	4.8 mmol/l
Urea	10.9 mmol/l
Creatinine	100 µmol/l
Serum bilirubin	30 µmol/l
Serum alkaline phosphatase	165 IU/l
Serum aspartate aminotransferase	68 IU/l
C Reactive protein	6 mg/l
Haemoglobin	126 g/l

White cell count	7.6 x 10 ⁹ /L
Platelets	122 x 10 ⁹ /L
INR	1.8

VBG (Current)

pH	7.368
Lac	1.8 mmol/l
Base Excess	-2.4 mmol/l
Bicarbonate	26.9 mmol/l
Hb	11.0 g/dL

What is the next most appropriate immediate course of action to take?

<input type="checkbox"/>	Begin transfusion of O-negative blood
<input type="checkbox"/>	Intravenous proton pump inhibitor (PPI) bolus
<input type="checkbox"/>	Intravenous terlipressin bolus
<input type="checkbox"/>	Platelet transfusion
<input type="checkbox"/>	Intravenous ciprofloxacin

Dashboard

Overall score: **0%**

1 -

□ Question 46 of 204



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Lac	1.8 mmol/l
Base Excess	-2.4 mmol/l
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Hb	11.0 g/dL

What is the next most appropriate immediate course of action to take?

	Begin transfusion of O-negative blood
	Intravenous proton pump inhibitor (PPI) bolus
	Intravenous terlipressin bolus
	Platelet transfusion
	Intravenous ciprofloxacin

Dashboard

Overall score: **0%**

1 -

□ Question 47 of 204



A 45 year old female ITU nurse presents to the outpatient Gastroenterology clinic with a 12 week history of watery diarrhoea. She has been moving her bowels up to 9 times a day, the diarrhoea is painless and there is no blood in the stool. She said that she has also lost weight. As a nurse, she says that she regularly weighs herself and her BMI has dropped from 20 kg/m² to 18 kg/m² in the past 2 months. There is no vomiting but there is some nausea.

She also tells you that she has had two close family bereavements recently and that she is fearful of losing her job which is causing her a significant amount of stress and anxiety. As a teenager, she tells you that she had an eating disorder which required talking therapy for a period of time but that she has had no relapse for 20 years. She has a history of hypothyroidism for which she takes Levothyroxine 100mcg PO OD. She is otherwise well. She has a family history of hypothyroidism and type 1 diabetes.

Full physical examination including PR is unremarkable. Bloods show the following:

Hb	11.3 g/dl
MCV	92 fl
Platelets	421 * 10 ⁹ /l
WBC	11.4 * 10 ⁹ /l
Neuts	7.0 * 10 ⁹ /l

Na ⁺	142 mmol/l
K ⁺	3.8 mmol/l
Urea	4.8 mmol/l
Creatinine	56 µmol/l
CRP	16 mg/l
TSH	1.67 u/l

Bilirubin	6 µmol/l
-----------	----------

ALP	90 u/l
ALT	12 u/l
Albumin	45 g/l

Abdominal x-ray: no abnormality detected

Colonoscopy: normal mucosa to terminal ileum on visual inspection.

Considering your differential diagnosis, which two investigations would be most appropriate to perform in order to be most confident about making a diagnosis?

	OGD and free T4
	OGD and serum thyroglobulin
	Urine laxative screen and serum thyroglobulin
	OGD and histology of bowel biopsies
	Urine laxative screen and histology of large bowel biopsies

Dashboard

Overall score: **0%**

1 -

Question 47 of 204



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	Urine laxative screen and serum thyroglobulin
	OGD and histology of bowel biopsies
	Urine laxative screen and histology of large bowel biopsies

Dashboard
Overall score: 0% 1 -

Question 48 of 204



A young man known to the gastroenterology team with alcoholic cirrhosis and grade two varices on his last OGD 7 months ago is admitted as a medical emergency to the resuscitation part of Accident and Emergency with haematemesis and melaena. It started 45 minutes ago when he immediately called an ambulance. He is able to tell you that apart from the cirrhosis and varices he does not have any other problems, and he takes only thiamine, vitamin B co-strong and propranolol (but he is unsure of the dose). He says he has been well over the past week, with no symptoms of disease, and your screening questions reveal nothing important. He admits that he still occasionally drinks alcohol, but hasn't in the past 2 weeks, and that he used to have an opiate based drug addiction, for which he's been clean the past 3 years.

His initial observations are as follows:

Respiratory rate	22 breaths/minute
Heart rate	102 beats/minute
Temperature	36.2°C
Blood pressure	85/33 mmHg
Saturations	100% on 4L nasal

Initial bloods

Hb	90 g/l
Platelets	72 * 10 ⁹ /l
WBC	6.4 * 10 ⁹ /l

His ECG shows RBBB and T wave inversion in leads V1 and V2 only.

After 3L of fluid resuscitation:

Hb	78 g/l
Platelets	63 * 10 ⁹ /l

WBC	5.9 * 10 ⁹ /l
-----	--------------------------

Na ⁺	129 mmol/l
K ⁺	4.2 mmol/l
Urea	14.2 mmol/l
Creatinine	75 µmol/l

Bilirubin	43 µmol/l
ALP	152 u/l
ALT	41 u/l
Albumin	29 g/l

PT	20.4 s
INR	1.7
APTT	38 s
Fibrinogen	0.8 g/L

His repeat observations are as follows:

Respiratory rate	18 breaths/minute
Heart rate	92 beats/minute
Temperature	36.4°C
Blood pressure	105/65 mmHg
Saturations	99% on 2L nasal

What medication would you give him?

	Fresh frozen plasma, Terlipressin, Ceftriaxone
	Fresh frozen plasma, Terlipressin, Ceftriaxone, Platelets, Packed red cells
	Fresh frozen plasma, Ceftriaxone, Platelets
	Fresh frozen plasma, Terlipressin, Ceftriaxone, Packed red cells
	Fresh frozen plasma, Terlipressin, Packed red cells, Platelets



Overall score: **0%**

1 -

□ Question 48 of 204



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Urea	14.2 mmol/l
Creatinine	75 µmol/l

Bilirubin	43 µmol/l
ALP	152 u/l
ALT	41 u/l
Albumin	29 g/l

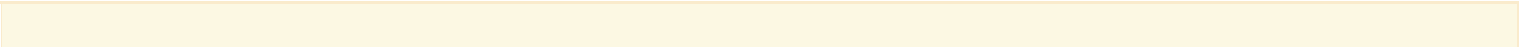
PT	20.4 s
INR	1.7
APTT	38 s
Fibrinogen	0.8 g/L

His repeat observations are as follows:

Respiratory rate	18 breaths/minute
Heart rate	92 beats/minute
Temperature	36.4°C
Blood pressure	105/65 mmHg
Saturations	99% on 2L nasal

What medication would you give him?

	Fresh frozen plasma, Terlipressin, Ceftriaxone
	Fresh frozen plasma, Terlipressin, Ceftriaxone, Platelets, Packed red cells
	Fresh frozen plasma, Ceftriaxone, Platelets
	Fresh frozen plasma, Terlipressin, Ceftriaxone, Packed red cells
	Fresh frozen plasma, Terlipressin, Packed red cells, Platelets



Dashboard

Overall score: **0%**

1 -

Question 49 of 204

□ □

An 81 year-old woman presents with a 2 year history of dysphagia for both solids and liquids. She now has to chew her food a lot before swallowing and often has to drink water with every bite. Frequently she coughs after eating and has experienced pain on several occasions behind her sternum when swallowing.

Barium swallow reveals narrowing at the gastro-esophageal junction, producing a 'bird's beak' appearance.

What is the most appropriate medical management for this condition?

	Ramipril
	Nifedipine
	Losartan
	Stenting
	Bisoprolol

Dashboard

Overall score: 0%

1 -

Question 49 of 204

□ □

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	Stenting
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1 -

□ Question 49 of 204

□ □

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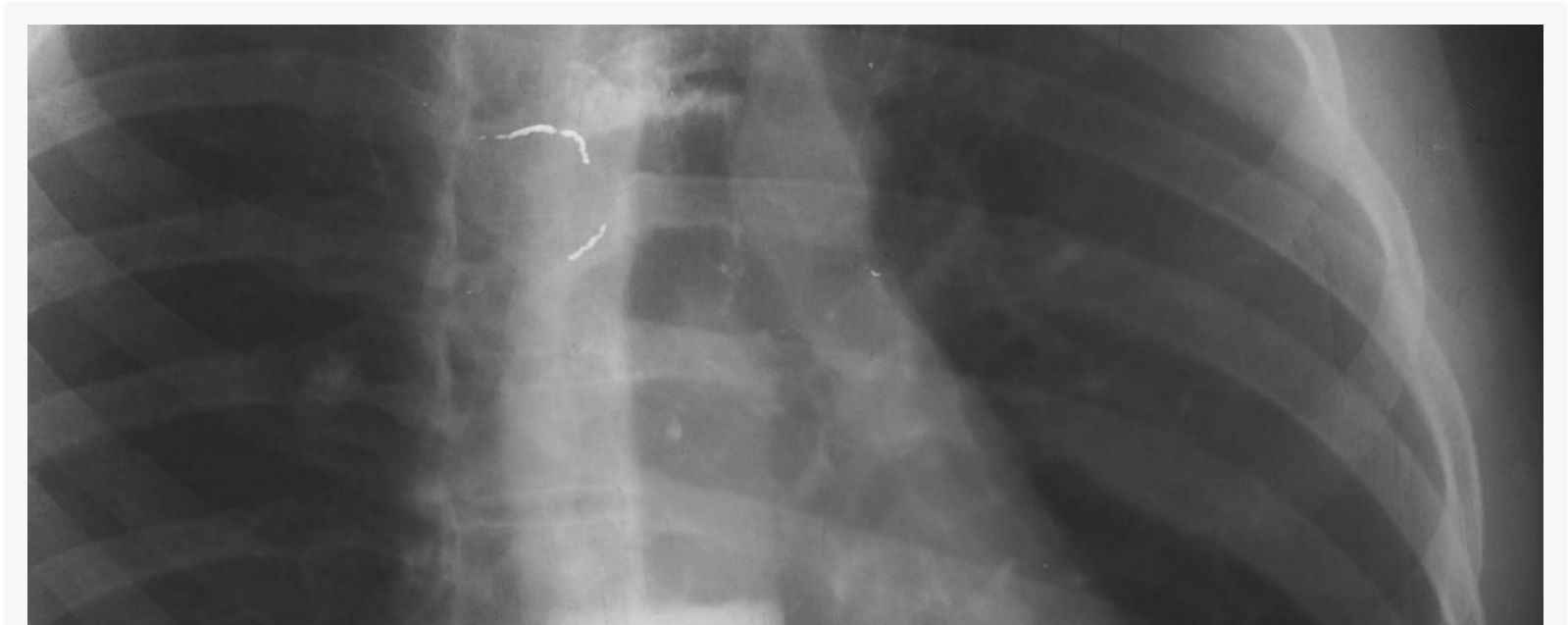
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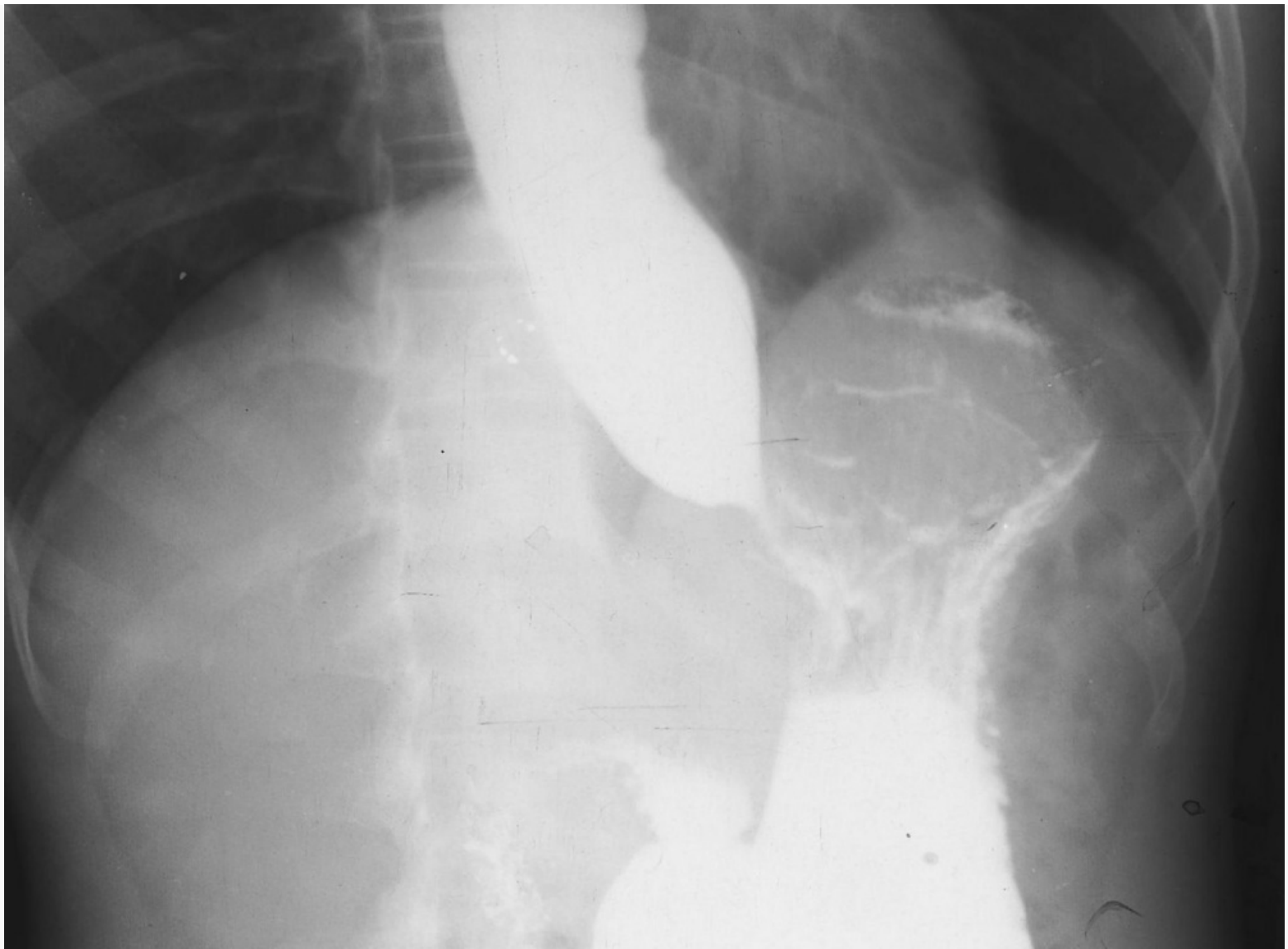
	Ramipril
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	Losartan
	Stenting
	Bisoprolol

Dashboard

Overall score: **0%**

1 -





□ Question 49 of 204

□ □

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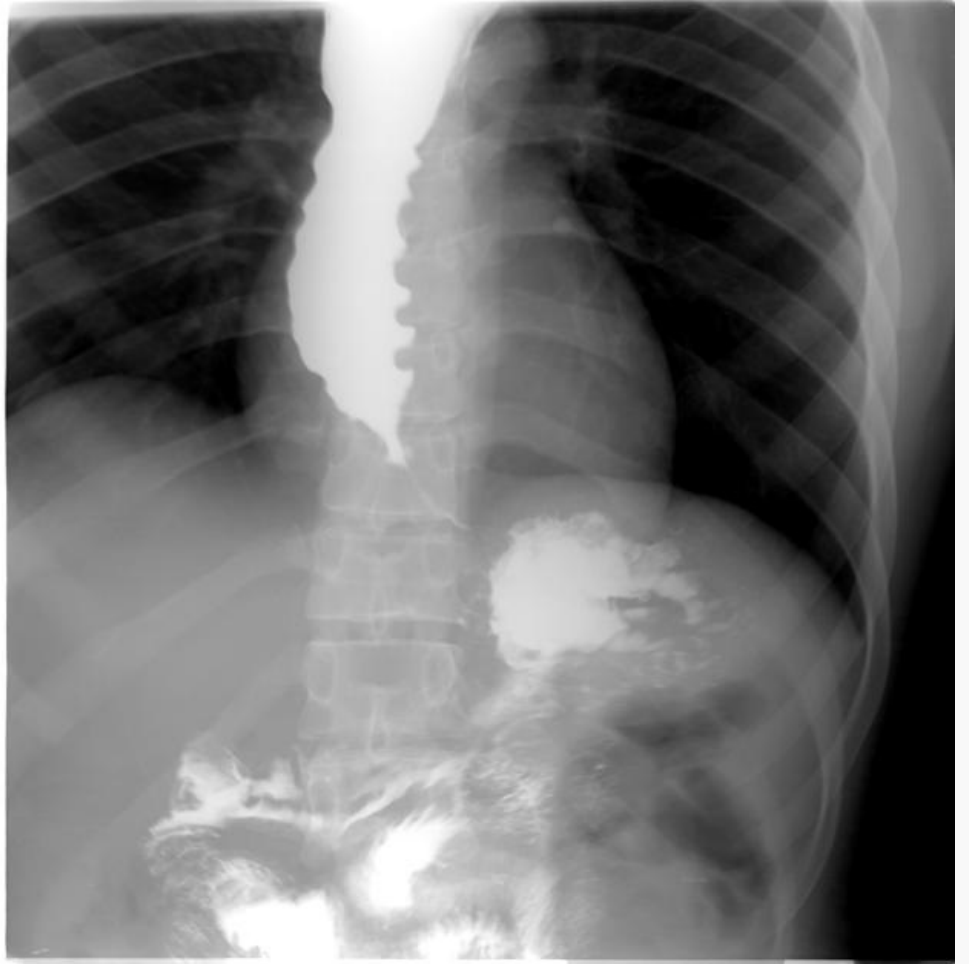
What is the most appropriate medical management for this condition?

	Ramipril
	Nifedipine
	Losartan
	Stenting
	Bisoprolol

Dashboard

Overall score: **0%**

1 -



□ Question 50 of 204

□ □

You are working on the gastroenterology ward in your local district general hospital, doing a ward round, when you come to examine one of your well known NASH (non-alcoholic steatohepatitis) cirrhosis patients. He's a 43-year-old man who had been admitted to the ward 3 days ago with a lower respiratory tract infection which has responded well to antibiotics. The patient appears clinically well from the end of the bed and has no complaints. He says that his ascites has been reasonably well managed over the past 4 years since diagnosis, needing only one ascitic drain during the admission that led to the diagnosis. On examination his chest appears to be clear today, his abdomen is soft and non-tender, and you can elicit a small amount of ascites on examination.

His blood results from this morning are as follows:

Hb	118 g/l
Platelets	$102 \times 10^9/l$
WBC	$4.5 \times 10^9/l$

Na ⁺	128 mmol/l
K ⁺	4.2 mmol/l
Urea	1.4 mmol/l
Creatinine	45 μ mol/l

Bilirubin	20 μ mol/l
ALP	134 u/l
ALT	24 u/l
Albumin	30 g/l

He tells you that his sodium has always given him a bit of trouble, and looking back at old results you noted that his usual sodium in clinic is consistently 133. His only medication is spironolactone 100mg twice daily

How should you manage this patient's hyponatraemia?

	Carry on spironolactone and fluid restrict to 1L/day
	Stop spironolactone and fluid restrict to 1L/day
	Reduce spironolactone to 50mg twice daily and monitor
	No change to medications - just monitor
	Stop spironolactone and monitor

Dashboard

Overall score: 0%

1 -

□ Question 50 of 204

□ □

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How should you manage this patient's hyponatraemia?

	Carry on spironolactone and fluid restrict to 1L/day
	Stop spironolactone and fluid restrict to 1L/day
	Reduce spironolactone to 50mg twice daily and monitor
	No change to medications - just monitor
	Stop spironolactone and monitor

Dashboard

Overall score: 0%

1 -

□ Question 51 of 204

□ □

A 40-year-old woman with a background of Sjogren's syndrome presents with fatigue and itchy skin. She has not been commenced on any new medications or travelled recently. On examination, she is found to have a palpable liver edge. Further investigations reveal the following results:

Bilirubin	22 $\mu\text{mol/l}$
ALP	400 u/l
ALT	35 u/l

Anti-mitochondrial antibodies positive, anti-smooth muscle antibodies negative

Anti-HBs positive, HBsAg negative, HBcAg negative

Hepatitis C negative

What is the most likely diagnosis?

	Primary biliary cirrhosis
	Primary sclerosing cholangitis
	Autoimmune hepatitis
	Acute Hepatitis B infection
	Hepatitis B carrier

Dashboard

Overall score: 0%

1 -

□ Question 51 of 204

□ □

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Anti-mitochondrial antibodies positive, anti-smooth muscle antibodies negative

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Hepatitis C negative

What is the most likely diagnosis?

	Primary biliary cirrhosis
	Primary sclerosing cholangitis
	Autoimmune hepatitis
	Acute Hepatitis B infection
	Hepatitis B carrier

Dashboard

Overall score: **0%****1** -

□ Question 52 of 204



A 60-year-old man is admitted with severe upper abdominal pain, nausea and dizziness lasting for the last day. On further questioning he admits to experiencing intermittent mild upper abdominal pain for the last month, typically after meals. His past medical history includes hypertension, type 2 diabetes, osteoarthritis and myocardial infarction 5 years ago for which he had a stent placed. His current medications include aspirin, ramipril, amlodipine, metformin, naproxen and paracetamol.

Whilst in the department he develops diarrhoea and examination of the stool shows melaena.

His blood pressure is 110/55 mmHg and heart rate is 95 beats per minute. On examination, he is tender in the epigastrium with no peritonism and normal bowel sounds. Examination of other systems is normal.

Blood results:

Hb	95 g/l	Na ⁺	145 mmol/l
Platelets	200 * 10 ⁹ /l	K ⁺	4.5 mmol/l
WBC	8 * 10 ⁹ /l	Urea	12 mmol/l
Neuts	3 * 10 ⁹ /l	Creatinine	102 µmol/l

He is treated given intravenous fluids and analgesia. All his regular analgesia aside from paracetamol is withheld. and taken to endoscopy later that day. A 1cm ulcer is seen in the gastric antrum with an adherent clot. This is clipped and injected with adrenalin. He recovers well from sedation and on return to the ward his blood pressure is 135/70 mmHg and heart rate 80 beats per minute. He has no further diarrhoea or vomiting and repeat haemoglobin is 121 g/l.

On discharge, what advice should he be given regarding his non-steroidal anti-inflammatory drugs?

	Continue both aspirin and naproxen and add a proton pump inhibitor
	Stop naproxen and aspirin. Start a proton pump inhibitor.
	Stop naproxen, change aspirin to clopidogrel and add a proton pump inhibitor

	Stop naproxen, change aspirin to dalteparin and add a proton pump inhibitor
	Stop naproxen, continue aspirin and add a proton pump inhibitor

Dashboard

Overall score: **0%**

1 -

□ Question 52 of 204



A 60-year-old man is admitted with severe upper abdominal pain, nausea and dizziness lasting for the last day. On further questioning he admits to experiencing intermittent mild upper abdominal pain for the last month, typically after meals. His past medical history includes hypertension, type 2 diabetes, osteoarthritis and myocardial infarction 5 years ago for which he had a stent placed. His current medications include aspirin, ramipril, amlodipine, metformin, naproxen and paracetamol.

Whilst in the department he develops diarrhoea and examination of the stool shows melaena.

His blood pressure is 110/55 mmHg and heart rate is 95 beats per minute. On examination, he is tender in the epigastrium with no peritonism and normal bowel sounds. Examination of other systems is normal.

Blood results:

Hb	95 g/l	Na ⁺	145 mmol/l
Platelets	200 * 10 ⁹ /l	K ⁺	4.5 mmol/l
WBC	8 * 10 ⁹ /l	Urea	12 mmol/l
Neuts	3 * 10 ⁹ /l	Creatinine	102 µmol/l

He is treated given intravenous fluids and analgesia. All his regular analgesia aside from paracetamol is withheld. and taken to endoscopy later that day. A 1cm ulcer is seen in the gastric antrum with an adherent clot. This is clipped and injected with adrenalin. He recovers well from sedation and on return to the ward his blood pressure is 135/70 mmHg and heart rate 80 beats per minute. He has no further diarrhoea or vomiting and repeat haemoglobin is 121 g/l.

On discharge, what advice should he be given regarding his non-steroidal anti-inflammatory drugs?

	Continue both aspirin and naproxen and add a proton pump inhibitor
	Stop naproxen and aspirin. Start a proton pump inhibitor.
	Stop naproxen, change aspirin to clopidogrel and add a proton pump inhibitor

	Stop naproxen, change aspirin to dalteparin and add a proton pump inhibitor
	Stop naproxen, continue aspirin and add a proton pump inhibitor

Dashboard

Overall score: **0%**
1 -

□ Question 53 of 204



A 62-year-old woman comes to the gastroenterology clinic for review. She has a history of watery diarrhoea over the course of the past 6 months, where she is opening her bowels some 4-6 times per day. There is other past medical history of hypertension, ischaemic heart disease, Type 2 diabetes and depression.

Investigations

Hb	11.5 g/l	Na ⁺	139 mmol/l	Bilirubin	12 µmol/l
Platelets	207 * 10 ⁹ /l	K ⁺	3.9 mmol/l	ALP	95 u/l
WBC	8.9 * 10 ⁹ /l	Urea	7.2 mmol/l	ALT	23 u/l
Neuts	5.6 * 10 ⁹ /l	Creatinine	100 µmol/l	γGT	56 u/l
Lymphs	1.8 * 10 ⁹ /l			Albumin	38 g/l
Eosin	0.5 * 10 ⁹ /l				

Colonoscopy: Mild mucosal oedema only, biopsy reveals lymphocytic infiltration

Which of the following agents is most likely to be the cause of her colonoscopy findings?

	Amlodipine
	Atorvastatin
	Lisinopril
	Metformin
	Sertraline

Overall score: **0%**

1 -

□ Question 53 of 204



A 62-year-old woman comes to the gastroenterology clinic for review. She has a history of watery diarrhoea over the course of the past 6 months, where she is opening her bowels some 4-6 times per day. There is other past medical history of hypertension, ischaemic heart disease, Type 2 diabetes and depression.

Investigations

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Platelets	207 * 10 ⁹ /l	K ⁺	3.9 mmol/l	ALP	95 u/l
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	Amlodipine
	Atorvastatin
	Lisinopril
	Metformin
	Sertraline

Overall score: **0%**

1 -

□ Question 54 of 204

□ □

A 62-year-old biology professor is seen after returning from a trip to South America. For the past week he has been investigated for fever, lymphadenopathy, periorbital oedema and headaches. A diagnosis of Chagas' disease is suspected.

During his admission he develops abdominal pain, constipation and distension. An abdominal film is requested:



© Image used on license from Radiopaedia



What complication has developed?

	Sigmoid volvulus
	Colon cancer
	Intussusception
	Hydronephrosis
	Ischaemic colitis

Overall score: **0%**

1 -

□ Question 54 of 204

□ □

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Dashboard

Overall score: **0%**

1 -

Question 54 of 204

□ □

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© Image used on license from Radiopaedia

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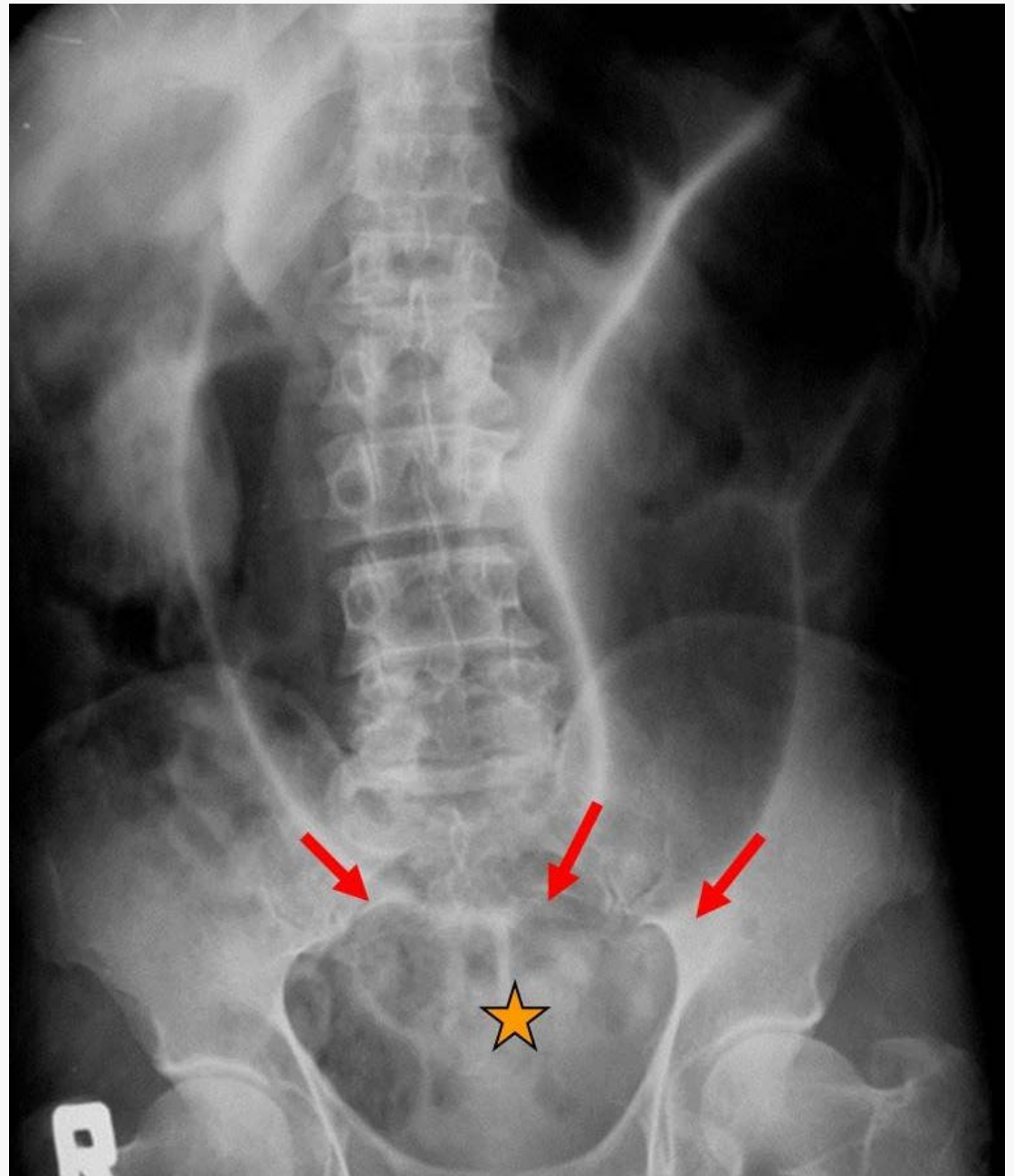
Dashboard

Overall score: 0%

1 -

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[Back to top](#)



□ Question 55 of 204

□ □

A 49 year-old woman is referred by her GP with a worsening 3-week history of chest pain and burning behind the sternum after eating. Other symptoms include tiredness and the patient has noticed that over the past four months her clothes have started to become much looser on her, although she has put this down to stress at work and skipping meals. She denies night sweats and her only past medical history is mild hypertension for which she takes ramipril. She is on no other regular medication and her father died of lung cancer at the age of 67. Her mother is still alive and well. She drinks 10-15 units per week and has a 25 pack year history.

On examination, heart sounds 1 and 2 are present with no added sounds, her pulse is regular and the character is good and she has clear lung fields. Abdominal exam reveals a soft, non-tender abdomen and bowel sounds are present.

She is referred to gastroenterology where an endoscopy reveals a 2cm diameter area that looks roughened and suspicious. Biopsy of this area is reported as having large number of lymphocytes that have irregular nuclear contours with abundant cytoplasm.

Which of the following is the most appropriate first-line treatment for this condition.

	Endoscopic surgical excision
	Chemotherapy
	Open surgery
	Amoxicillin, clarithromycin and omeprazole treatment
	Radiotherapy

Dashboard

Overall score: 0%

1 -

□ Question 55 of 204

□ □

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	Endoscopic surgical excision
	Chemotherapy
	Open surgery
	Amoxicillin, clarithromycin and omeprazole treatment
	Radiotherapy

Dashboard

Overall score: 0%

1 -

Question 56 of 204

□ □

A 24 year-old man presents to his GP because he is worried that he may have bowel cancer. He does not currently have any clinical features that would suggest bowel cancer and is taking no medication. His father died of colon cancer at the age of 49 and his paternal uncle also had bowel cancer diagnosed at the age of 44. He was previously referred for a colonoscopy four months ago which was normal.

His abdominal examination is normal. You rearrange for the patient to have a colonoscopy in 2 years time.

What is the most appropriate next management step?

	Check for a mutation in chromosome 5q21
	Check for a DNA mismatch repair gene mutation
	Perform a computed tomography (CT) with contrast scan of his abdomen
	Check carcinoembryonic antigen (CEA) level
	Check for a P53 mutation

Dashboard

Overall score: 0%

1 -

□ Question 56 of 204

□ □

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	Check for a P53 mutation

Dashboard

Overall score: **0%**

1 -

□ Question 57 of 204



A 45-year-old man with long-standing Crohns disease is reviewed in gastroenterology clinic. Initial diagnosis was 12 years previously when he presented as an emergency due to a perianal fistula and associated abscess. This had necessitated emergency surgery and treatment with intravenous corticosteroids. Once remission had been obtained through use of corticosteroids, azathioprine had been used as an immunomodulating agent to maintain remission. Subsequently, the patients disease had been fairly well controlled with disease flares on average less than every 2 years. When flares occurred they tended to cause the patient severe bouts of bloody diarrhoea. Large bowel endoscopies performed following disease exacerbation tended to show colonic inflammation with multiple biopsies consistent with the original histological diagnosis of Crohns disease.

Two months previously, the patients routine monitoring bloods had demonstrated derangement of liver function tests prompting further investigations (details given below). Following conclusion of these investigations, the patient had been initiated on cholestyramine and vitamin supplementation.

Alanine aminotransferase	45 U / L
Alkaline phosphatase	356 U / L
Bilirubin	105 micromol / L
Albumin	30 g / L
ANCA (PR3)	Negative
ANCA (MPO)	Positive
Anti-smooth muscle antibody	Positive

Endoscopic retrograde cholangio-pancreatogram: multiple intrahepatic bile duct strictures and beading

Following discussion with the patient about his new diagnosis he raised his concerns about his future risk of bowel cancer and whether he would require regular endoscopic surveillance.

What is the appropriate frequency of surveillance colonoscopy for this patient?

Not indicated

	Every 1 year
	Every 3 years
	Every 5 years
	Every 10 years

Dashboard

Overall score: 0%

1 -

□ Question 57 of 204



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What is the appropriate frequency of surveillance colonoscopy for this patient?

Not indicated

	Every 1 year
	Every 3 years
	Every 5 years
	Every 10 years

Dashboard

Overall score: **0%**
1 -

□ Question 58 of 204



A 25-year-old woman is reviewed in gastroenterology clinic six weeks after a recent hospital admission with abdominal symptoms. During the initial admission, the patient had presented with a 6 week history of very frequent bloody diarrhoea, a 10 kg weight loss and intermittent severe abdominal pain. Endoscopy had demonstrated a pan-colitis with histological features consistent with Crohn's disease. In addition, a CT scan of the abdomen had revealed a localised abscess associated with the proximal colon that had required percutaneous drainage and a course of IV antibiotics.

In addition to the above, the patient had been treated with IV hydrocortisone followed by a reducing course of prednisolone (initially 40 mg daily, tapered over 8 weeks). Steroid treatment had initially given a good response with the patients symptoms markedly improving during her hospital stay. Azathioprine treatment had been initiated prior to discharge in an attempt to maintain remission during wean of oral steroids.

In clinic, the patient reported being concordant with azathioprine therapy. However, she found that when she had reduced her prednisolone dose below 15 mg daily, she had recurrent abdominal pains and frequent bloody diarrhoea (although less severe than at presentation). She had also noted some pain to the left side of her anus when defecating.

Examination of the patients abdomen revealed some lower abdominal tenderness but without features of peritonitis. External examination showed an area of ulceration one centimetre lateral to the anus.

Haemoglobin	95 g / dL
Mean cell volume	98 fL
White cell count	16.9×10^9 / microlitre
Neutrophils	12.6×10^9 / microlitre
Platelets	451×10^9 / microlitre
Urea	8.0 mmol / L
Creatinine	97 micromol / L
Sodium	143 mmol / L
Potassium	3.9 mmol / L
CRP	125 mg / L

What is the appropriate next line treatment to induce remission in this patient?

	Colectomy
	Methotrexate
	Metronidazole
	Infliximab
	Budesonide

Dashboard

Overall score: 0%

1 -

□ Question 58 of 204



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	Metronidazole
	Infliximab
	Budesonide

Dashboard

Overall score: **0%**
1 -

□ Question 59 of 204



A 42-year-old woman attends the gastroenterology clinic for outpatient review approximately one month following a recent admission to hospital. She had presented with a 6 week history of frequent bloody diarrhoea and cramping abdominal pain. In addition, she reported a long-standing tendency to suffer from multiple mouth ulcers. She had lost approximately, 8 kilograms of weight between the onset of diarrhoea and presentation to hospital.

The results of investigations performed during the hospital admission are given below. Following investigation, a short course of intravenous steroids had been given followed by oral prednisolone (initial dose 40 mg daily, slowly tapered over 8 weeks).

The patient reported near complete resolution of her previous symptoms and welcome relief from her oral ulceration. She had regained some of the weight she had previously lost and reported her appetite to be good. A discussion was had with the patient about future therapy and she indicated that she would prefer to consider the initiation of further medication to attempt to maintain her symptom remission.

Stool microscopy: no organisms seen

Stool culture: no organisms grown

Colonoscopy: patchy inflammation with 'cobblestone' appearance affecting ascending and transverse colon and terminal ileum

Colonic histology: multiple samples demonstrating signs of chronic transmural inflammation, crypt abscesses and submucosal fibrosis

CT abdomen: no evidence of intra-abdominal collection, structuring or abnormal fistulation

What is the most appropriate medication to maintain disease remission in this patient?

	Methotrexate
	Infliximab
	Budesonide

	Azathioprine
	Metronidazole

Dashboard

Overall score: **0%**
1 -

Question 59 of 204

□ □

A 42-year-old woman attends the gastroenterology clinic for outpatient review approximately one month following a recent admission to hospital. She had presented with a 6 week history of frequent bloody diarrhoea and cramping abdominal pain. In addition, she reported a long-standing tendency to suffer from multiple mouth ulcers. She had lost approximately, 8 kilograms of weight between the onset of diarrhoea and presentation to hospital.

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What is the most appropriate medication to maintain disease remission in this patient?

	Methotrexate
	Infliximab
	Budesonide

	Azathioprine
	Metronidazole

Dashboard

Overall score: **0%**
1 -

Question 60 of 204

□ □

A 71-year-old retired grocer is referred to the gastroenterology clinic with frequency of bowel movements. She describes passing stools up to 10 times a day for the last month. The stools are watery with no blood. She is also very nauseated and has lost 6 kg in weight. Her husband report she gets frequent flushing of the face. You suspect that she might have carcinoid syndrome and request she perform a 24-hour urinary collection for 5-HIAA. When giving instructions about how to perform the collection it is important to counsel her about foods and medications that may affect the result. Which of the following would you not need to mention?

	Avocados
	Paracetamol
	Bananas
	Potatoes
	Levodopa

Dashboard

Overall score: 0%

1 -

□ Question 60 of 204

□ □

A 71-year-old retired grocer is referred to the gastroenterology clinic with frequency of bowel movements. She describes passing stools up to 10 times a day for the last month. The stools are watery with no blood. She is also very nauseated and has lost 6 kg in weight. Her husband report she gets frequent flushing of the face. You suspect that she might have carcinoid syndrome and request she perform a 24-hour urinary collection for 5-HIAA. When giving instructions about how to perform the collection it is important to counsel her about foods and medications that may affect the result. Which of the following would you not need to mention?

	Avocados
	Paracetamol
	Bananas
	Potatoes
	Levodopa

Dashboard

Overall score: **0%****1** -

Question 61 of 204

□ □

A 74-year-old lady presents with non-bloody diarrhoea for five days. She was treated for *Clostridium difficile* infection two weeks ago. In the last five days, she has experienced six episodes of diarrhoea per day. Her past medical history includes heart failure, lymphoma and type two diabetes mellitus. On examination, her blood pressure is 134/88 mmHg, pulse is 90/min, temperature is 38°C, respiratory rate is 16/min and oxygen saturation is 97% on air. She is slightly tender in the left lower quadrant. There are no signs of peritonism and bowel sound is normal. Stool culture result shows positive for glutamate dehydrogenase and toxin enzyme immunoassay. Which of the following drug should be used?

	Oral metronidazole
	Intravenous vancomycin
	Intravenous metronidazole
	Oral fidaxomicin
	Intravenous fluid and paracetamol

Dashboard

Overall score: 0%

1 -

□ Question 61 of 204

□ □

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	Intravenous vancomycin
	Intravenous metronidazole
	Oral fidaxomicin
	Intravenous fluid and paracetamol

Dashboard

Overall score: 0%

1 -

□ Question 62 of 204

□ □

A 24 year old Greek man presented after his partner reported a personality change over the past three weeks. She reported that he had been very low in mood, and had been behaving strangely. He reported being a little fatigued over the past couple of weeks. Neurological examination was unremarkable other than a rest tremor in his right hand. There was evidence of scleral icterus, and the liver edge was just palpable below the costal margin.

Initial blood results are shown below:

Haemoglobin	98 g/L
Platelets	$156 \times 10^9/L$
Mean corpuscular volume	89 fl
White cell count	$6.8 \times 10^9/L$
Reticulocyte count	5%
Alkaline phosphatase	142 U/L
Bilirubin	55 mol/L
Alanine transaminase	105 U/L
Albumin	35 g/L

Which investigation is most likely to reveal the underlying cause of his anaemia?

	Direct antiglobulin test
	24-hour urinary copper excretion
	Vitamin B12 level
	Iron profile

Dashboard

Overall score: **0%**

1 -

□ Question 62 of 204

□ □

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	24-hour urinary copper excretion
	Vitamin B12 level
	Iron profile

Dashboard

Overall score: **0%**

1 -

Question 63 of 204

□ □

A 35-year-old ex intravenous drug user has been diagnosed with has HBe-Ag positive Hepatitis B. Her investigation results are shown below:

HBV DNA	2100 IU/ml
ALT	60 IU/L

ALT last checked 3 months ago and found to be ALT 60 IU/L.

What is the recommended first line treatment for this patient?

	Tenofovir disoproxil
	Entecavir
	Peginterferon alfa-2a
	Telbivudine
	Sofosbuvir

Dashboard

Overall score: 0%

1 -

Question 63 of 204



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	Sofosbuvir

Dashboard

Overall score: 0%

1 -

Question 64 of 204

□ □

A 45-year-old man with a 20-year history of ulcerative colitis was reviewed in the inflammatory bowel disease clinic. He opens his bowels once a day with no rectal bleeding. Aside from some fatigue, he is asymptomatic. He had required multiple courses of steroids over the past 4 years due to recurrent flare-ups of his colitis. He had gone into remission a year ago after receiving a course of infliximab. He had a colonoscopy 18 months ago which showed extensive left sided disease with friable mucosa and easy bleeding on contact with the endoscope. A repeat colonoscopy 6 months ago showed improved appearances and evidence of mucosal healing.

Blood tests done in clinic show:

Hb	102 g/l	Na ⁺	139 mmol/l	Bilirubin	63 µmol/l
Platelets	275 * 10 ⁹ /l	K ⁺	4.2 mmol/l	ALP	350 u/l
WBC	7.5 * 10 ⁹ /l	Urea	3.2 mmol/l	ALT	55 u/l
Neuts	4.2 * 10 ⁹ /l	Creatinine	90 µmol/l	γGT	136 u/l
Lymphs	1.2 * 10 ⁹ /l			Albumin	33 g/l
INR	1.3				

Which is the most appropriate investigation to confirm the cause of this patient's abnormal LFTs?

	Ultrasound liver
	CT abdomen
	Endoscopic retrograde cholangiopancreatography
	Magnetic resonance cholangiopancreatography
	Liver biopsy

Overall score: **0%**

1 -

□ Question 64 of 204



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	CT abdomen
	Endoscopic retrograde cholangiopancreatography
	Magnetic resonance cholangiopancreatography
	Liver biopsy

Dashboard

Overall score: **0%**

1 -

Question 65 of 204

□ □

A 48-year-old known alcoholic liver disease patient is admitted via Accident and Emergency with profuse haematemesis. He has been drinking 6 litres of cider per day for the last week. He denies abdominal pain or melena. On examination, he has peripheral stigmata of chronic liver disease and is very pale. His abdomen is soft and he has no tenderness or hepatosplenomegaly. His blood pressure is 90/56 mmHg and he is tachycardic at 120/min. His last OGD 6 months ago showed 3 columns of small varices.

His blood results are as follows:

Hb	58 g/l
Platelets	$109 \times 10^9/l$
WBC	$8.4 \times 10^9/l$
INR	1.6
PT	19 seconds

Na ⁺	144 mmol/l
K ⁺	4.9 mmol/l
Urea	18.1 mmol/l
Creatinine	97 μ mol/l
CRP	5 mg/l

Bilirubin	87 μ mol/l
ALP	189 u/l
ALT	71 u/l
Albumin	28 g/l

He is transfused 2 units by A&E and given 2 units of Fresh Frozen plasma to correct his coagulopathy. He is also given Tazocin 4.5g TDS and Terlipressin 1mg QDS after discussion with the on call Gastroenterologist. He is taken for OGD which shows bleeding oesophageal varices. He has 5 bands applied to the varices but the endoscopist is unable to stop the bleeding. He is returned to the ward where he continues to have haematemesis with low blood pressure and ongoing tachycardia.

What is the next step in his management?

	Repeat OGD
	TIPSS
	Sengstaken Blakemore tube
	Increase Terlipressin to 2mg
	Further FFP

Dashboard

Overall score: 0%

1 -

Question 65 of 204

□ □

A 48-year-old known alcoholic liver disease patient is admitted via Accident and Emergency with profuse haematemesis. He has been drinking 6 litres of cider per day for the last week. He denies abdominal pain or melena. On examination, he has peripheral stigmata of chronic liver disease and is very pale. His abdomen is soft and he has no tenderness or hepatosplenomegaly. His blood pressure is 90/56 mmHg and he is tachycardic at 120/min. His last OGD 6 months ago showed 3 columns of small varices.

His blood results are as follows:

Hb	58 g/l
Platelets	$109 \times 10^9/l$
WBC	$8.4 \times 10^9/l$
INR	1.6
PT	19 seconds

Na ⁺	144 mmol/l
K ⁺	4.9 mmol/l
Urea	18.1 mmol/l
Creatinine	97 μ mol/l
CRP	5 mg/l

Bilirubin	87 μ mol/l
ALP	189 u/l
ALT	71 u/l
Albumin	28 g/l

He is transfused 2 units by A&E and given 2 units of Fresh Frozen plasma to correct his coagulopathy. He is also given Tazocin 4.5g TDS and Terlipressin 1mg QDS after discussion with the on call Gastroenterologist. He is taken for OGD which shows bleeding oesophageal varices. He has 5 bands applied to the varices but the endoscopist is unable to stop the bleeding. He is returned to the ward where he continues to have haematemesis with low blood pressure and ongoing tachycardia.

What is the next step in his management?

	Repeat OGD
	TIPSS
	Sengstaken Blakemore tube
	Increase Terlipressin to 2mg
	Further FFP

Dashboard

Overall score: **0%**

1 -

Question 66 of 204

A 37-year-old man is reviewed on the gastroenterology ward. He has a history of alcoholic liver disease was admitted following a large haematemesis. After admission he had an emergency endoscopy where oesophageal varices were identified and banded. Intravenous terlipressin has already been given. What is the most appropriate next step in management?

<input type="checkbox"/>	Oral metronidazole
<input type="checkbox"/>	Oral nifedipine
<input type="checkbox"/>	Oral tranexamic acid
<input type="checkbox"/>	Oral co-amoxiclav
<input type="checkbox"/>	Oral norfloxacin

Dashboard

Overall score: **0%**

1 -

Question 66 of 204

A 37-year-old man is reviewed on the gastroenterology ward. He has a history of alcoholic liver disease was admitted following a large haematemesis. After admission he had an emergency endoscopy where oesophageal varices were identified and banded. Intravenous terlipressin has already been given. What is the most appropriate next step in management?

<input type="radio"/>	Oral metronidazole
<input type="radio"/>	Oral nifedipine
<input type="radio"/>	Oral tranexamic acid
<input type="radio"/>	Oral co-amoxiclav
<input checked="" type="radio"/>	Oral norfloxacin

Dashboard

Overall score: **0%**

1 -

□ Question 67 of 204

□ □

A 40-year-old man who recently had an appendicectomy presents to hospital unwell. He has generalised abdominal pain and pyrexia. Initial bloods are presented below.

Hb	134 g/l	Na ⁺	139 mmol/l	Bilirubin	18 µmol/l	B12	900ng/l
Platelets	490 * 10 ⁹ /l	K ⁺	4.1 mmol/l	ALP	120 u/l	Folate	2.1µg/l
WBC	23.2 * 10 ⁹ /l	Urea	7.6 mmol/l	ALT	35 u/l	Iron	18µmol/l
Neuts	19.8 * 10 ⁹ /l	Creatinine	101 µmol/l	γGT	30 u/l		
Lymphs	3.2 * 10 ⁹ /l			Albumin	41 g/l		
Eosin	0.1 * 10 ⁹ /l						

Automated lab haematinics show a grossly elevated serum B12 with normal folate and iron. Blood culture confirms gram-negative septicaemia. What is the likely diagnosis?

	Atypical respiratory tract infection
	Infectious mononucleosis
	Liver abscess
	Catheter associated urinary tract infection
	Infective endocarditis

Dashboard

Overall score: 0%

1 -

Question 67 of 204

□ □

A 40-year-old man who recently had an appendicectomy presents to hospital unwell. He has generalised abdominal pain and pyrexia. Initial bloods are presented below.

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Eosin	0.1 * 10 ⁹ /l						

Automated lab haematinics show a grossly elevated serum B12 with normal folate and iron. Blood culture confirms gram-negative septicaemia. What is the likely diagnosis?

	Atypical respiratory tract infection
	Infectious mononucleosis
	Liver abscess
	Catheter associated urinary tract infection
	Infective endocarditis

Dashboard

Overall score: **0%****1** -

Question 67 of 204

□ □

A 40-year-old man who recently had an appendicectomy presents to hospital unwell. He has generalised abdominal pain and pyrexia. Initial bloods are presented below.

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Lymphs	3.2 * 10 ⁹ /l			Albumin	41 g/l		
Eosin	0.1 * 10 ⁹ /l						

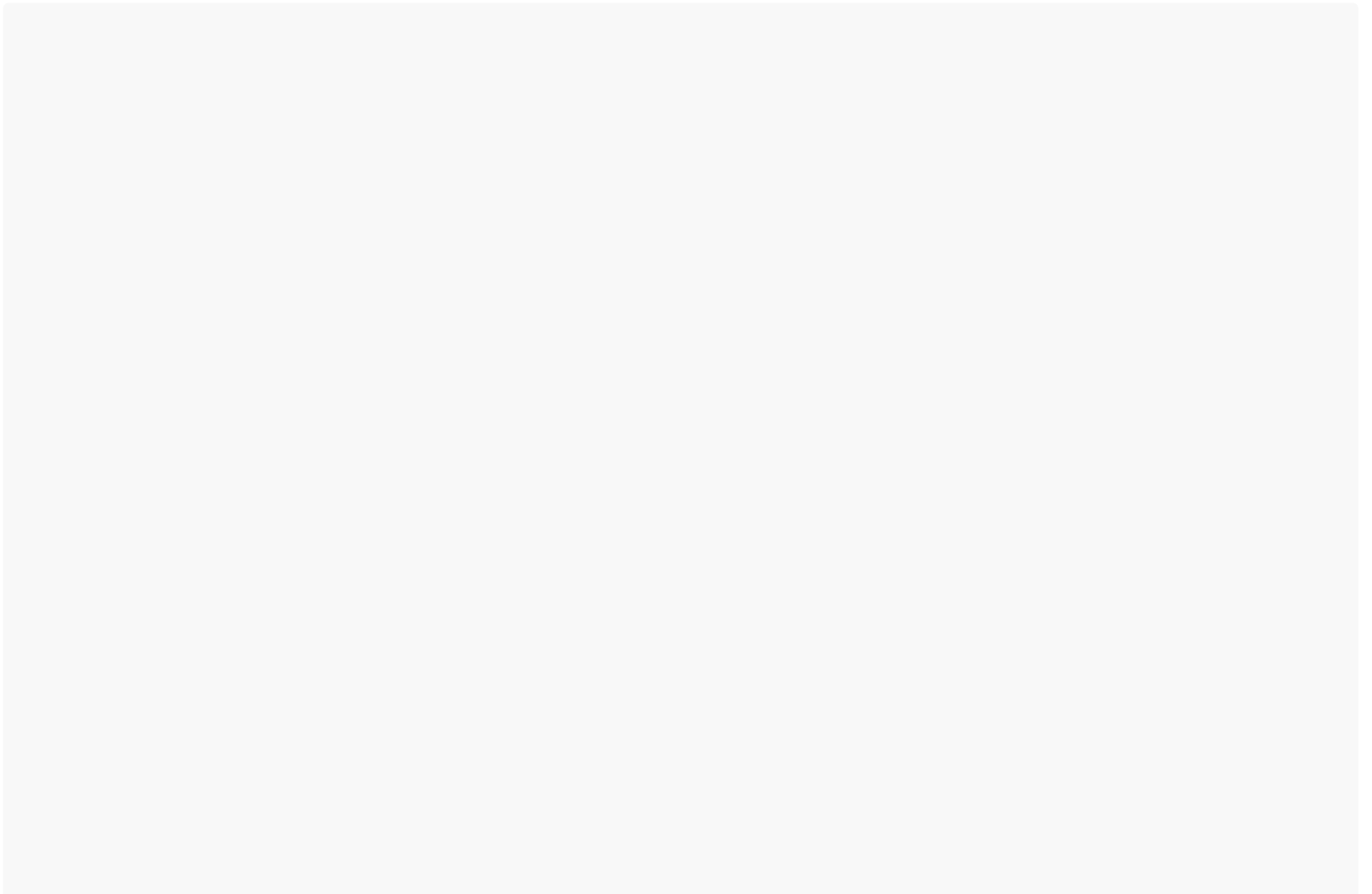
Automated lab haematinics show a grossly elevated serum B12 with normal folate and iron. Blood culture confirms gram-negative septicaemia. What is the likely diagnosis?

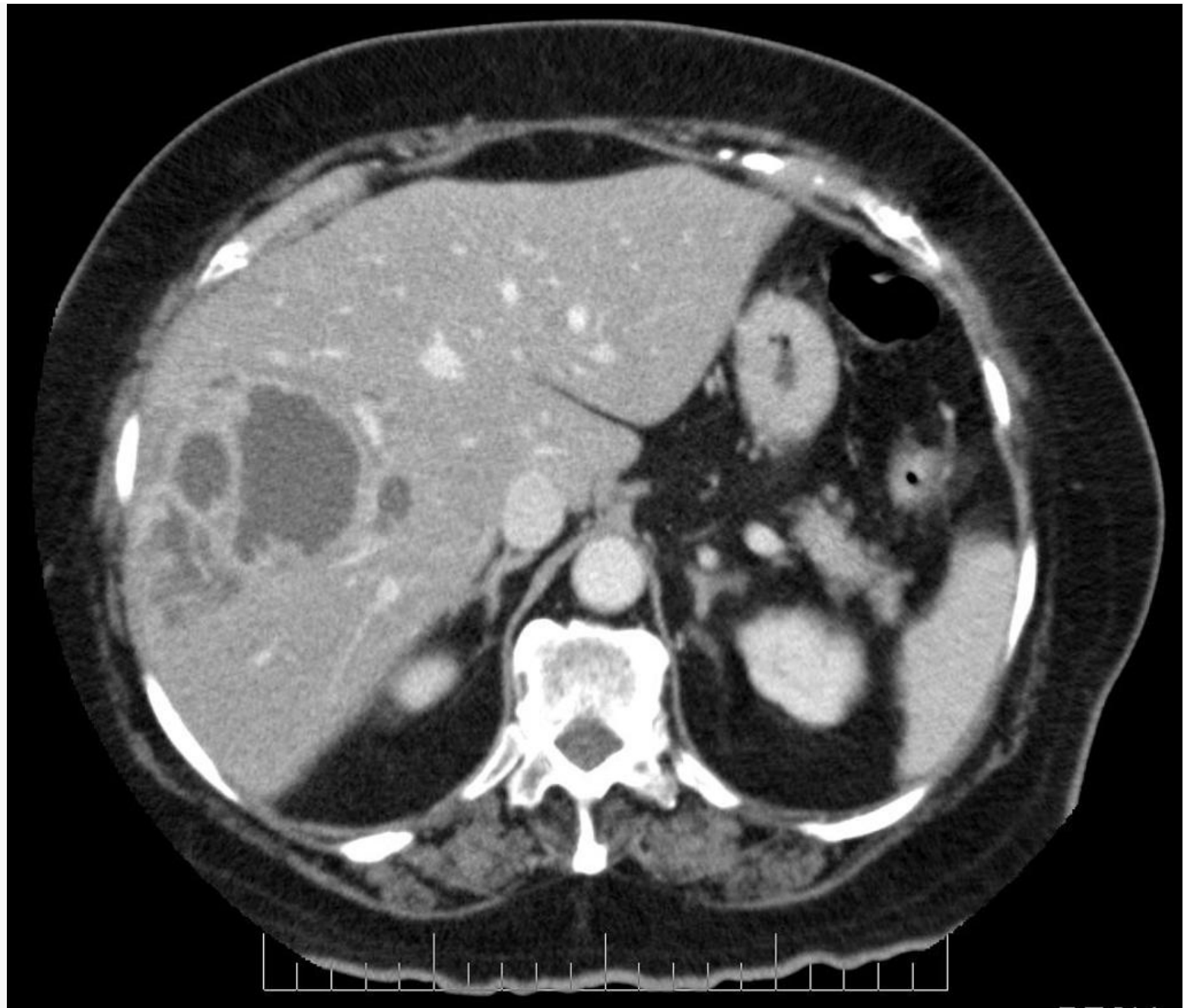
	Atypical respiratory tract infection
	Infectious mononucleosis
	Liver abscess
	Catheter associated urinary tract infection
	Infective endocarditis

Dashboard

Overall score: **0%**

1 -





□ Question 68 of 204



A 25-year-old female undergraduate student presented to the gastroenterology outpatient clinic after referral from her GP. The referral letter stated that the patient had a three-year history of irritable bowel syndrome (IBS) and was complaining mainly of constipation. The GP had tried dietary advice and different laxatives, including senna and sodium docusate in full doses and a trial of macrogol with no benefit. The patient stated that the problem was mainly happening during exams. She underwent appendectomy 5 years ago with no postoperative complications. Blood investigations were as follows:

Hb	120 g/l
Platelets	$310 \times 10^9/l$
WBC	$8 \times 10^9/l$

Na ⁺	140 mmol/l
K ⁺	4.4 mmol/l
Urea	6.5 mmol/l
Creatinine	100 μ mol/l

What is the next step in management?

	Add tricyclic anti-depressant (TCA)
	Add selective serotonin re-uptake inhibitor (SSRI)
	Increase the dose current laxatives and advice to relax
	Add lactulose
	Add linaclotide

Overall score: **0%**

1 -

Question 68 of 204



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Urea	6.5 mmol/l
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What is the next step in management?

	Add tricyclic anti-depressant (TCA)
	Add selective serotonin re-uptake inhibitor (SSRI)
	Increase the dose current laxatives and advice to relax
	Add lactulose
	Add linaclotide

Dashboard

Overall score: **0%**

1 -

Question 69 of 204



A 54 year old Caucasian female presents with a 3 month history of dysphagia to bread and solid meats, with no problems with swallowing oral liquids. She has lost about 2 stones in weight unintentionally during this period. She denies any night sweats or fevers, haematemesis, change in bowel habit or malaena. She reports no change in her voice or aspiration episodes. On examination, you note koilonychias and an enlarged tongue on examination with conjunctival pallor. Her blood tests are as follows:

Hb	7.6 g/dl
MCV	62 fl
Platelets	246 * 10 ⁹ /l
WBC	7.2 * 10 ⁹ /l
Ferritin	22 ng/ml
Na ⁺	142 mmol/l
K ⁺	4.2 mmol/l
Urea	5.6 mmol/l
Creatinine	55 µmol/l
CRP	20 mg/l

Her GP refers her for an urgent upper oesophageal-gastric endoscopy (OGD) as part of the 2 week wait of suspected cancer. OGD reveals narrowed distal oesophageal lumen caused by webs that are ruptured as the scope is passed. What is the likely diagnosis?

	Plummer-Vinson syndrome
	Oesophageal squamous cell carcinoma
	Oesophageal adenocarcinoma

	Pharyngeal carcinoma
	Oesophageal rings

Dashboard

Overall score: **0%**
1 -

□ Question 69 of 204



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	Plummer-Vinson syndrome
	Oesophageal squamous cell carcinoma
	Oesophageal adenocarcinoma

	Pharyngeal carcinoma
	Oesophageal rings

Dashboard

Overall score: **0%**
1 -

□ Question 70 of 204



A 65-year-old retired woman with a history of diet-controlled diabetes and mild COPD is brought in by ambulance with 3 episodes of black stool followed by collapse. She describes a 2 day history of intermittent abdominal pain. Her regular medications are Seretide inhaler and paracetamol/ibuprofen when required for knee osteoarthritis. On examination, she has conjunctival pallor and epigastric tenderness. Rectal examination confirms the presence of melaena.

Her observations are as follows:

- Temperature 36.4
- Respiratory 28/min
- Saturations 96% on air
- Heart rate 126 bpm
- Blood pressure 78/44 mmHg

Hb	67 g/l	Na ⁺	140 mmol/l	Bilirubin	12 µmol/l
Platelets	88* 10 ⁹ /l	K ⁺	3.9 mmol/l	ALP	100 u/l
WBC	12.0* 10 ⁹ /l	Urea	13.3 mmol/l	ALT	28 u/l
Neuts	6.0* 10 ⁹ /l	Creatinine	63 µmol/l	Albumin	38 g/l
Lymphs	1.0* 10 ⁹ /l	INR	1.2		
Eosin	0.3* 10 ⁹ /l	APTT	26	Fibrinogen	4.0 g/l

What medical therapy should be urgently instituted prior to endoscopy?

	Red blood cell transfusion
	Red blood cell transfusion and IV omeprazole
	Red blood cell transfusion and fresh frozen plasma
	Red blood cell and platelet transfusion and IV omeprazole

Dashboard

Overall score: **0%**

1 -

Question 70 of 204



A 65-year-old retired woman with a history of diet-controlled diabetes and mild COPD is brought in by ambulance with 3 episodes of black stool followed by collapse. She describes a 2 day history of intermittent abdominal pain. Her regular medications are Seretide inhaler and paracetamol/ibuprofen when required for knee osteoarthritis. On examination, she has conjunctival pallor and epigastric tenderness. Rectal examination confirms the presence of melaena.

Her observations are as follows:

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Hb	67 g/l	Na ⁺	140 mmol/l	Bilirubin	12 µmol/l
Platelets	88* 10 ⁹ /l	K ⁺	3.9 mmol/l	ALP	100 u/l
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	Red blood cell transfusion
	Red blood cell transfusion and IV omeprazole
	Red blood cell transfusion and fresh frozen plasma
	Red blood cell and platelet transfusion and IV omeprazole

Dashboard

Overall score: **0%**

1 -

Question 71 of 204

A 75-year-old female was recently started on alendronate for treatment of osteoporosis following a fragility fracture. She returns to your clinic as she has suffered troubling upper gastrointestinal side effects. What is the most appropriate next step in her management?

<input type="checkbox"/>	Continue alendronate
<input type="checkbox"/>	Change alendronate to strontium ranelate
<input type="checkbox"/>	Change alendronate to risedronate
<input type="checkbox"/>	Change alendronate to raloxifene
<input type="checkbox"/>	Change alendronate to denosumab

Dashboard

Overall score: **0%**

1 -

□ Question 71 of 204

□ □

A 75-year-old female was recently started on alendronate for treatment of osteoporosis following a fragility fracture. She returns to your clinic as she has suffered troubling upper gastrointestinal side effects. What is the most appropriate next step in her management?

	Continue alendronate
	Change alendronate to strontium ranelate
	Change alendronate to risedronate
	Change alendronate to raloxifene
	Change alendronate to denosumab

Dashboard

Overall score: **0%****1** -

Question 71 of 204

□ □

A 75-year-old female was recently started on alendronate for treatment of osteoporosis following a fragility fracture. She returns to your clinic as she has suffered troubling upper gastrointestinal side effects. What is the most appropriate next step in her management?

	Continue alendronate
	Change alendronate to strontium ranelate
	Change alendronate to risedronate
	Change alendronate to raloxifene
	Change alendronate to denosumab

Dashboard

Overall score: **0%**

1 -



□ Question 72 of 204

□ □

A 60-year-old woman presents to the Emergency Department with abdominal distension and pain. This has been getting progressively worse over the past 24 hours.

Her past medical history includes a hysterectomy 5 years ago with ovarian preservation.

A CT of her abdomen is requested:



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What is the most likely diagnosis?

	Autosomal dominant polycystic kidney disease
	Pseudomyxoma peritonei
	Metastatic renal cell cancer
	Meigs' syndrome
	Small bowel obstruction

Dashboard

Overall score: 0%

1 -

□ Question 72 of 204

□ □

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Dashboard

Overall score: **0%**

1 -

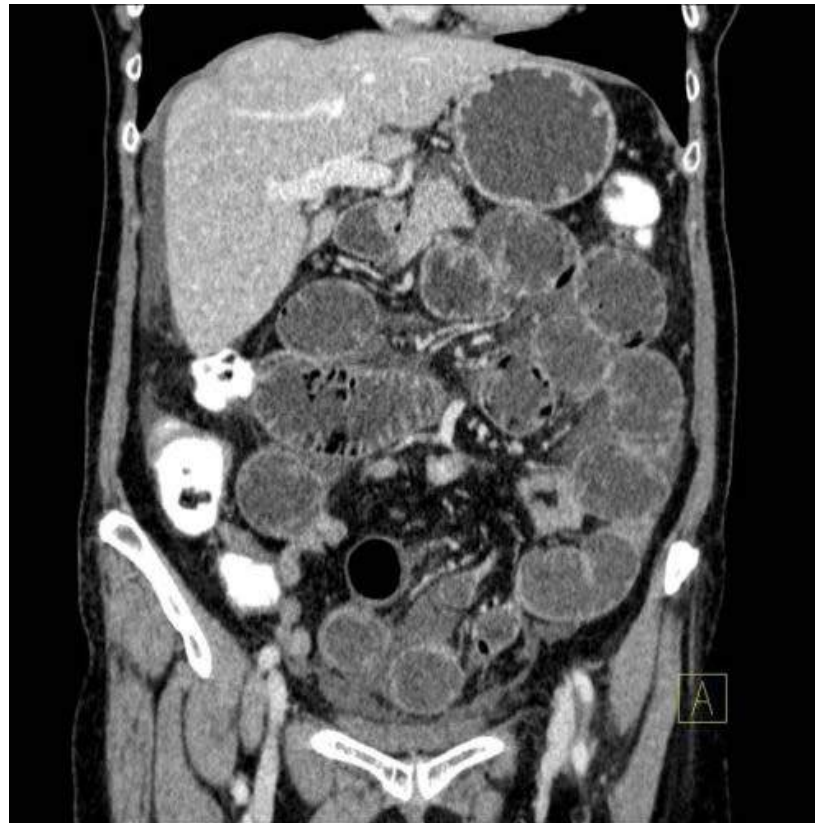
□ Question 72 of 204

□ □

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Dashboard

Overall score: **0%**

1 -



□ Question 72 of 204

□ □

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A CT of her abdomen is requested:





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	Autosomal dominant polycystic kidney disease
	Pseudomyxoma peritonei
	Metastatic renal cell cancer
	Meigs' syndrome
	Small bowel obstruction

Dashboard

Overall score: **0%**

1 -



Question 73 of 204

□ □

A 32-year-old primigravida at 37 weeks attends the antenatal unit complaining of abdominal pain which is worse on the right side. She has also been vomiting. Her blood pressure is 148/97 mmHg. She denies any abnormal discharge and reports that fetal movements are still present. Her blood results are shown below.

Hb	93 g/l
Platelets	89 * 10 ⁹ /l
WBC	9.0 * 10 ⁹ /l
Urate	0.49 mmol/l
Bilirubin	32 µmol/l
ALP	203 u/l
ALT	190 u/l
AST	233 u/l

You are phoned for advice on the results. What is the most likely diagnosis?

	HELLP syndrome
	Obstetric cholestasis
	Acute fatty liver
	Hyperemesis gravidarum
	Gout

Overall score: **0%**

1 -

Question 73 of 204

□ □

A 32-year-old primigravida at 37 weeks attends the antenatal unit complaining of abdominal pain which is worse on the right side. She has also been vomiting. Her blood pressure is 148/97 mmHg. She denies any abnormal discharge and reports that fetal movements are still present. Her blood results are shown below.

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ALP	203 u/l
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AST	233 u/l

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	HELLP syndrome
	Obstetric cholestasis
	Acute fatty liver
	Hyperemesis gravidarum
	Gout

Overall score: **0%**

1 -

□ Question 74 of 204



A 38-year-old man is referred in by his GP with increasing frequency of diarrhoea over the last 4 days. He is a known ulcerative colitis patient who is well managed on azathioprine 200mg OD and mesalazine 2.4mg BD. He last had a flare 2 years ago and has been well in the interim. He is passing up to 10 watery motions a day and is suffering from faecal urgency and nocturnal episodes. He describes cramping left iliac fossa pain. There is no blood or mucus in the stools. On examination, he is febrile at 38.2 degrees celsius. His blood pressure is 120/75 mmHg and his heart rate is 100/min. On examination, he is underweight with a BMI of 18.5 and dehydrated. His abdomen is soft but he is tender in the left iliac fossa. He refuses a PR examination. Respiratory and cardiovascular examinations are normal.

His blood tests show:

Hb	110 g/l
Platelets	$189 \times 10^9/l$
WBC	$3.8 \times 10^9/l$
Neutrophils	$0.89 \times 10^9/l$
INR	1.1 (0.9-1.2)

Na ⁺	136 mmol/l
K ⁺	4.9 mmol/l
Urea	8.0 mmol/l
Creatinine	100 μ mol/l
Magnesium	0.79 mmol/L (0.7-1.0)
Calcium	2.4 mmol/L (2.1-2.58)
CRP	78 mg/l

Bilirubin	5 μ mol/l

ALP	78 u/l
ALT	28 u/l
Albumin	33 g/l

He is started on IV hydrocortisone 100mg QDS and IV fluids. Stool specimens are sent and are reported as negative for *C. difficile* toxin. He has a flexible sigmoidoscopy the next day which shows widespread left sided colitis. The biopsy results show the presence of inclusion bodies in the colonic mucosa. What is the appropriate treatment to start for this gentleman?

	Infliximab
	Ganciclovir
	Metronidazole
	Fluconazole
	Tazocin

Dashboard

Overall score: **0%**

1 -

□ Question 74 of 204



A 38-year-old man is referred in by his GP with increasing frequency of diarrhoea over the last 4 days. He is a known ulcerative colitis patient who is well managed on azathioprine 200mg OD and mesalazine 2.4mg BD. He last had a flare 2 years ago and has been well in the interim. He is passing up to 10 watery motions a day and is suffering from faecal urgency and nocturnal episodes. He describes cramping left iliac fossa pain. There is no blood or mucus in the stools. On examination, he is febrile at 38.2 degrees celsius. His blood pressure is 120/75 mmHg and his heart rate is 100/min. On examination, he is underweight with a BMI of 18.5 and dehydrated. His abdomen is soft but he is tender in the left iliac fossa. He refuses a PR examination. Respiratory and cardiovascular examinations are normal.

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	Infliximab
	Ganciclovir
	Metronidazole
	Fluconazole
	Tazocin

Dashboard

Overall score: **0%**

1 -

Question 74 of 204

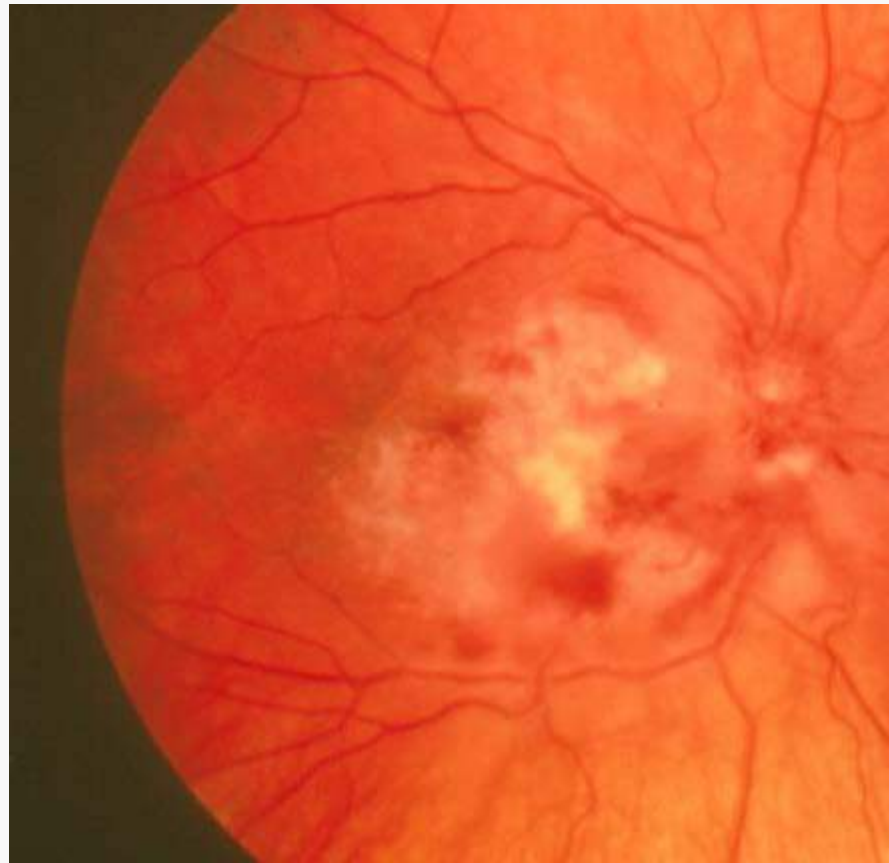
A 38-year-old man is referred in by his GP with inflammatory bowel disease (IBD) who is well managed on azathioprine 2 years ago and has been well in the interim. He is experiencing weight loss, fatigue, and nocturnal episodes. He describes crampy abdominal pain. On examination, he is febrile at 38.2 degrees celsius. On examination, he is underweight with a BMI of 18.5. There is tenderness in the right iliac fossa. He refuses a PR examination. Respiratory examination is normal.

His blood tests show:

Hb	110 g/l
Platelets	$189 \times 10^9/l$
WBC	$3.8 \times 10^9/l$
Neutrophils	$0.89 \times 10^9/l$
INR	1.1 (0.9-1.2)

Na ⁺	136 mmol/l
K ⁺	4.9 mmol/l
Urea	8.0 mmol/l
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	Infliximab
	Ganciclovir
	Metronidazole
	Fluconazole
	Tazocin

Dashboard

Overall score: **0%**

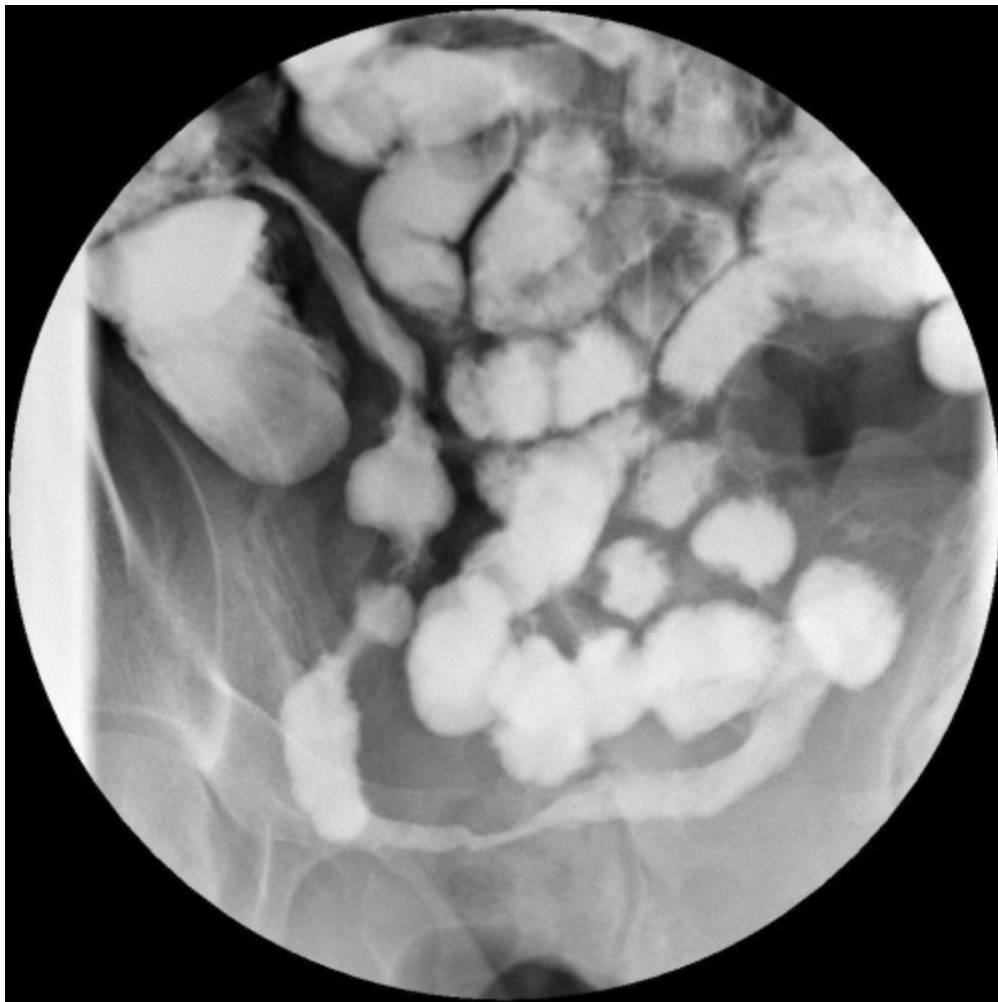
1 -

□ Question 75 of 204

□ □

A 27-year-old man is referred to the gastroenterology clinic due to a 4 month history of diarrhoea. He is now passing around 6 loose non-bloody stools per day. This has been associated with weight loss of 5 kg. He suffers from colicky abdominal pains, particularly after eating.

A barium study is shown below:



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What is the most likely diagnosis?

	Volvulus
	Coeliac disease
	Crohn's disease
	Ulcerative colitis
	Irritable bowel syndrome

Dashboard

Overall score: **0%**

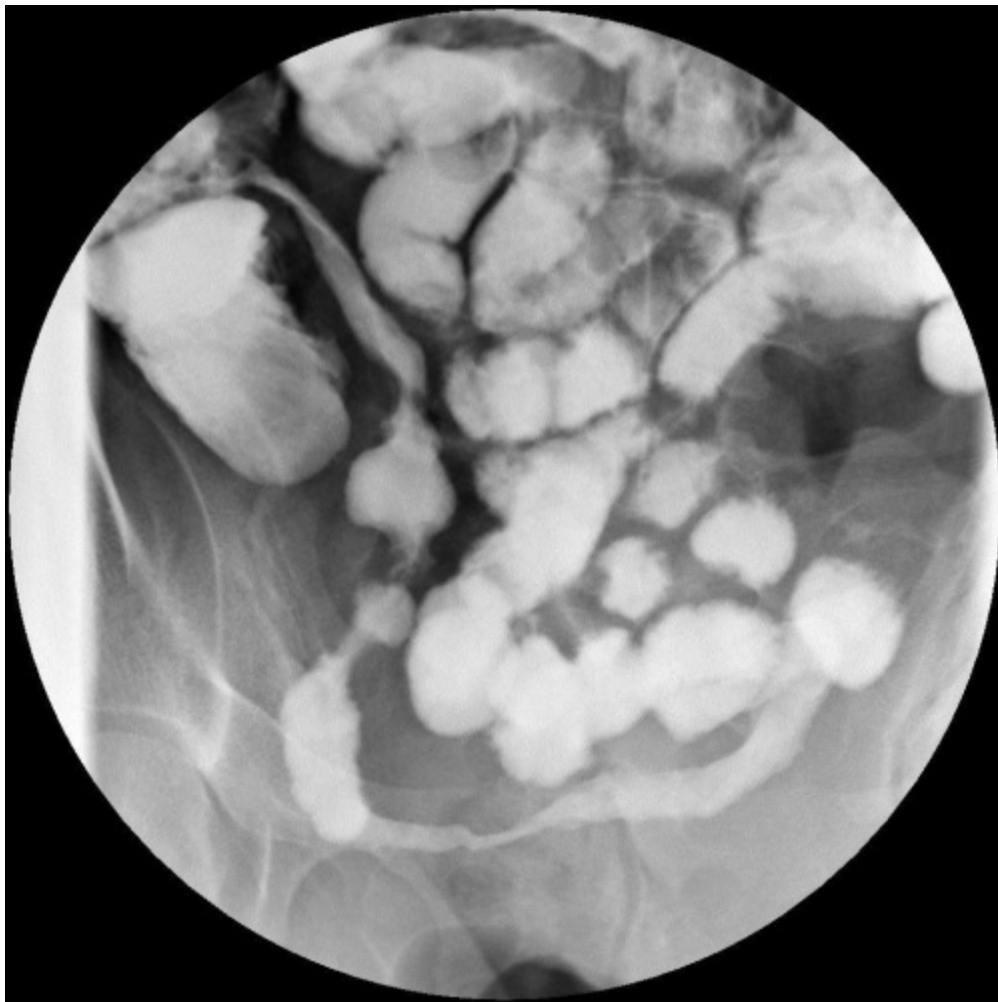
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□ Question 75 of 204

□ □

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	Volvulus
	Coeliac disease
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Dashboard

Overall score: **0%**

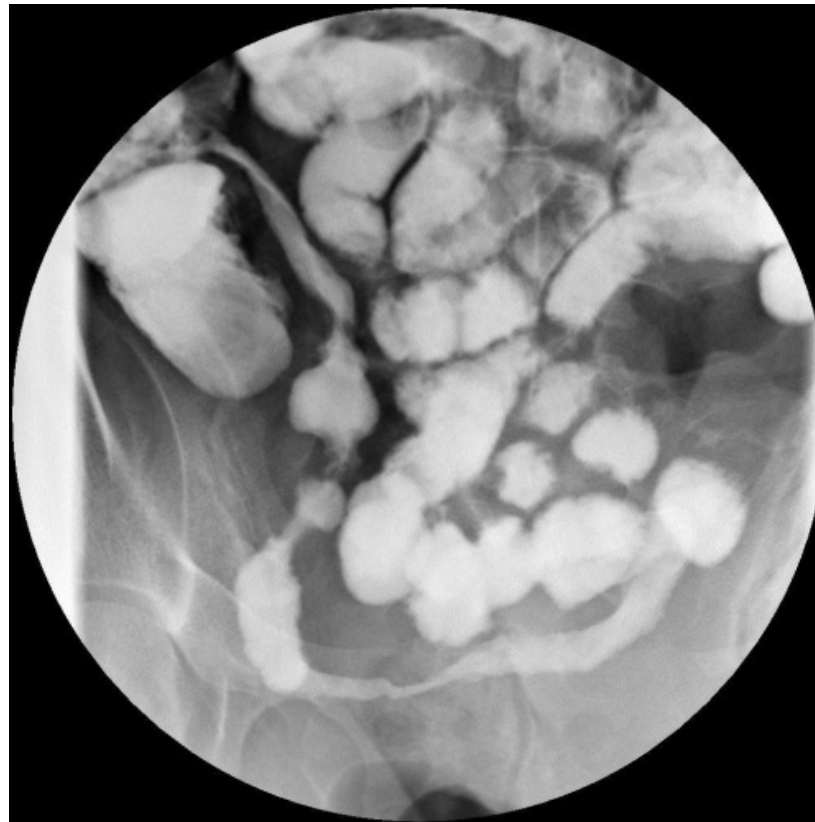
1 -

□ Question 75 of 204

□ □

A 27-year-old man is referred to the gastroenterology clinic due to a 4 month history of diarrhoea. He is now passing around 6 loose non-bloody stools per day. This has been associated with weight loss of 5 kg. He suffers from colicky abdominal pains, particularly after eating.

A barium study is shown below:



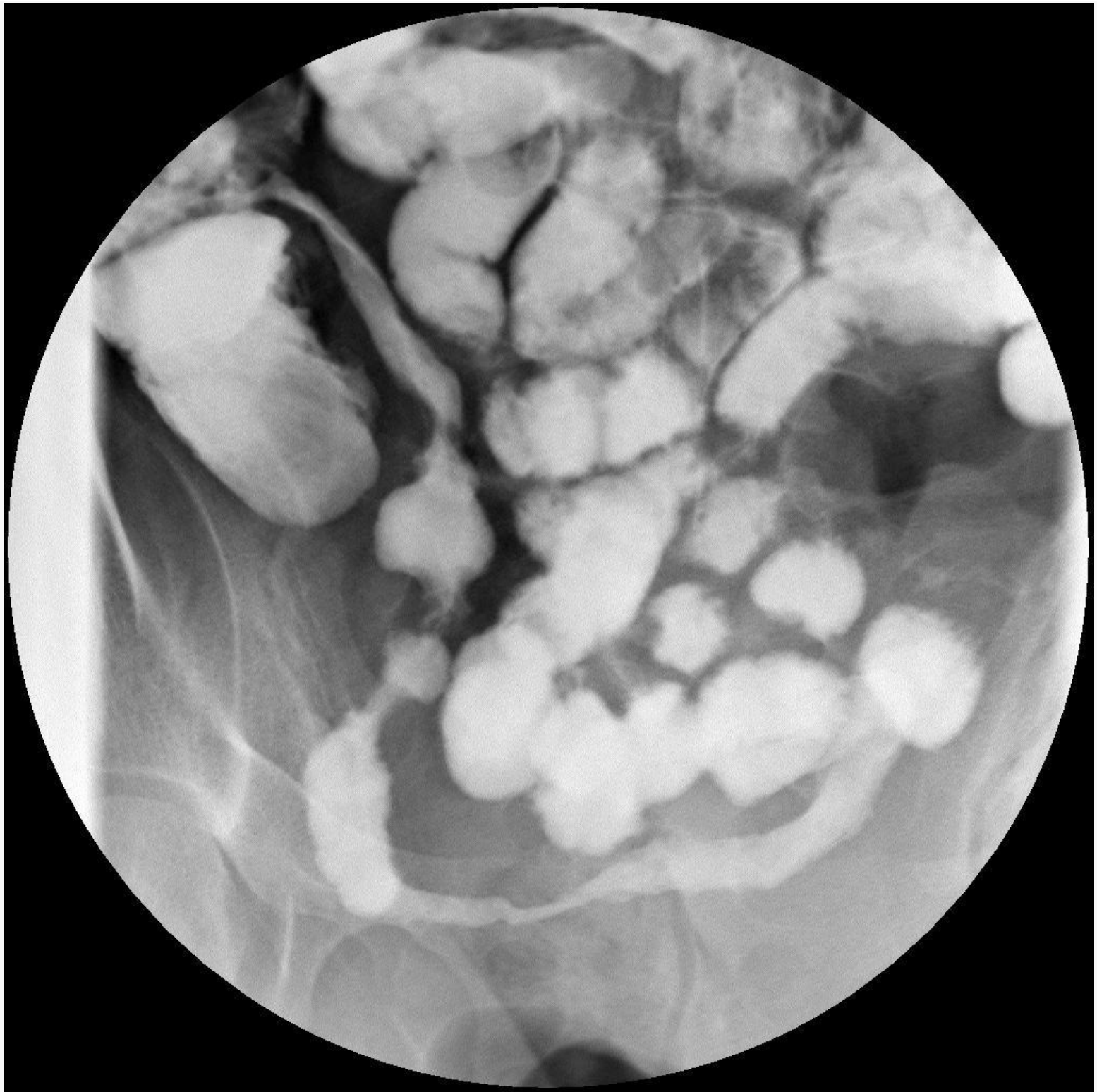
What is the most likely diagnosis?

	Volvulus
	Coeliac disease
	Crohn's disease
	Ulcerative colitis
	Irritable bowel syndrome

Dashboard

Overall score: **0%**

1 -



□ Question 76 of 204



A 36-year-old man attends gastroenterology clinic with an 8-month history of watery diarrhoea. He opens his bowels up to 15 times a day and this is not associated with any rectal bleeding. His symptoms are not relieved by loperamide. He has a history of Crohn's disease which was diagnosed 5 years ago and had an ileal resection 12 months ago following an inflammatory stricture. He does not smoke and drinks approximately 35 units of alcohol a week. His medications include omeprazole 20mg OD, paracetamol 1g QDS and ibuprofen 400mg TDS PRN.

His blood tests are:

Hb	115 g/l	Na ⁺	139 mmol/l	Bilirubin	12 µmol/l
Platelets	395 * 10 ⁹ /l	K ⁺	3.9 mmol/l	ALP	100 u/l
WBC	10.5 * 10 ⁹ /l	Urea	6.5 mmol/l	ALT	42 u/l
Neuts	5.5 * 10 ⁹ /l	Creatinine	100 µmol/l	γGT	65 u/l
CRP	4 mg/L			Albumin	37 g/l
Amylase	124 U/L				

Which investigation is most likely to confirm the diagnosis?

	Faecal elastase
	CT abdomen
	Faecal calprotectin
	Secretin stimulation test
	SeHCAT test

Overall score: **0%**

1 -

□ Question 76 of 204



A 36-year-old man attends gastroenterology clinic with an 8-month history of watery diarrhoea. He opens his bowels up to 15 times a day and this is not associated with any rectal bleeding. His symptoms are not relieved by loperamide. He has a history of Crohn's disease which was diagnosed 5 years ago and had an ileal resection 12 months ago following an inflammatory stricture. He does not smoke and drinks approximately 35 units of alcohol a week. His medications include omeprazole 20mg OD, paracetamol 1g QDS and ibuprofen 400mg TDS PRN.

His blood tests are:

Hb	115 g/l	Na ⁺	139 mmol/l	Bilirubin	12 µmol/l
Platelets	395 * 10 ⁹ /l	K ⁺	3.9 mmol/l	ALP	100 u/l
WBC	10.5 * 10 ⁹ /l	Urea	6.5 mmol/l	ALT	42 u/l
Neuts	5.5 * 10 ⁹ /l	Creatinine	100 µmol/l	γGT	65 u/l
CRP	4 mg/L			Albumin	37 g/l
Amylase	124 U/L				

Which investigation is most likely to confirm the diagnosis?

	Faecal elastase
	CT abdomen
	Faecal calprotectin
	Secretin stimulation test
	SeHCAT test

Overall score: **0%**

1 -

□ Question 77 of 204



A 50-year-old man with known alcoholic hepatitis is admitted to the Emergency Department generally unwell. He has had vague abdominal pain and general malaise for 4 days. His wife tells you he has been eating and drinking much less in that time and confirms he has been abstinent from alcohol for over a year.

On examination he appears clinically dehydrated and is drowsy. His heart rate is 121 beats per minute and his blood pressure is 102/55 mmHg. His temperature is 37.4 °C. His chest is clear. His abdomen is soft with suprapubic tenderness but no organomegaly. There is some dullness in the flanks.

His urine dip is positive for nitrites and 1+ leucocytes.

His blood tests are as follows:

Hb	115 g/l	Na ⁺	125 mmol/l	Bilirubin	24 µmol/l
Platelets	189 * 10 ⁹ /l	K ⁺	4.9 mmol/l	ALP	250 u/l
WBC	14 * 10 ⁹ /l	Urea	11 mmol/l	ALT	124 u/l
Neuts	10 * 10 ⁹ /l	Creatinine	230 µmol/l	γGT	255 u/l
Lymphs	2.5 * 10 ⁹ /l	CRP	75 mg/dl	Albumin	30 g/l

He is treated with antibiotics and normal saline but after 24 hours his sodium is 124 mmol/l and creatinine is 229 µmol/l.

His urine sodium is 12 mmol/l and an ultrasound of the abdomen shows mild ascites, a cirrhotic liver and a normal renal tract.

What is the next most appropriate step?

	5% dextrose
	Fluid restriction
	Hartmann's solution

	Human albumin solution
	Hypertonic saline

Dashboard

Overall score: **0%**
1 -

□ Question 77 of 204



A 50-year-old man with known alcoholic hepatitis is admitted to the Emergency Department generally unwell. He has had vague abdominal pain and general malaise for 4 days. His wife tells you he has been eating and drinking much less in that time and confirms he has been abstinent from alcohol for over a year.

On examination he appears clinically dehydrated and is drowsy. His heart rate is 121 beats per minute and his blood pressure is 102/55 mmHg. His temperature is 37.4 °C. His chest is clear. His abdomen is soft with suprapubic tenderness but no organomegaly. There is some dullness in the flanks.

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Lymphs	2.5 * 10 ⁹ /l	CRP	75 mg/dl	Albumin	30 g/l

He is treated with antibiotics and normal saline but after 24 hours his sodium is 124 mmol/l and creatinine is 229 µmol/l.

His urine sodium is 12 mmol/l and an ultrasound of the abdomen shows mild ascites, a cirrhotic liver and a normal renal tract.

What is the next most appropriate step?

	5% dextrose
	Fluid restriction
	Hartmann's solution

	Human albumin solution
	Hypertonic saline

Dashboard

Overall score: **0%**
1 -

□ Question 78 of 204

□ □

A 60-year-old man presented to the Emergency Department with profuse, foul smelling diarrhoea, abdominal pain and fever.

His past medical history included hypertension, gout and osteoarthritis. His bowel habits are usually regular and there has been no recent change. Two weeks ago he underwent an endoscopy for dyspepsia and was diagnosed with gastritis. He was currently taking amlodipine 5mg, omeprazole 20mg, simvastatin 20mg, salbutamol inhaler one puff as required. He had no known drug allergies. He recently returned from a business trip to Paris.

On examination he was unwell with a heart rate of 110 beats/min and regular, a blood pressure of 100/60 mmHg, oxygen saturations of 96% on air and a temperature of 38°C. He was peripherally shut down with a capillary refill time of 3 seconds. Abdominal examination revealed a distended and diffusely tender abdomen with guarding.

Initial bloods showed:

Na+	140 mmol/L
K+	5.0 mmol/L
Urea	10 mmol/L
Creatinine	130 mmol/L
Hb	13.0 g/dL
WBC	$20.0 \times 10^9/L$
Neutrophils	89%
LFTs	Normal

Abdominal X-ray showed a loss of bowel wall architecture and thumb-printing consistent. Erect chest x-ray showed clear lung fields with no air under the diaphragm.

What is the most likely cause of his symptoms?

--	--

	Salmonellosis
	Inflammatory bowel disease
	Ischaemic colitis
	Diverticulitis
	Omeprazole-induced <i>Clostridium difficile</i> infection

Dashboard

Overall score: **0%**

1 -

□ Question 78 of 204

□ □

A 60-year-old man presented to the Emergency Department with profuse, foul smelling diarrhoea, abdominal pain and fever.

His past medical history included hypertension, gout and osteoarthritis. His bowel habits are usually regular and there has been no recent change. Two weeks ago he underwent an endoscopy for dyspepsia and was diagnosed with gastritis. He was currently taking amlodipine 5mg, omeprazole 20mg, simvastatin 20mg, salbutamol inhaler one puff as required. He had no known drug allergies. He recently returned from a business trip to Paris.

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Initial bloods showed:

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Neutrophils	89%
LFTs	Normal

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What is the most likely cause of his symptoms?

	Salmonellosis
	Inflammatory bowel disease
	Ischaemic colitis
	Diverticulitis
	Omeprazole-induced <i>Clostridium difficile</i> infection

Dashboard

Overall score: **0%**

1 -

Question 79 of 204

□ □

A 57-year-old gentleman with presents to gastroenterology clinic for review. He has been investigated for haemochromatosis and is being told that this diagnosis is confirmed. On referral, he had a past medical history of previously unexplained cirrhosis with transaminitis, arthritis causing arthralgia and hypogonadism. He is due to be started on regular venesection. Which of his problems is most likely to improve with treatment?

	Cirrhosis
	Transaminitis
	Arthritis
	Arthralgia
	Hypogonadism

Dashboard

Overall score: 0%

1 -

Question 79 of 204

A 57-year-old gentleman with presents to gastroenterology clinic for review. He has been investigated for haemochromatosis and is being told that this diagnosis is confirmed. On referral, he had a past medical history of previously unexplained cirrhosis with transaminitis, arthritis causing arthralgia and hypogonadism. He is due to be started on regular venesection. Which of his problems is most likely to improve with treatment?

	Cirrhosis
	Transaminitis
	Arthritis
	Arthralgia
	Hypogonadism

Dashboard

Overall score: **0%**

1 -

Question 80 of 204

□ □

A 29 year old man with ulcerative colitis presents to clinic. His colitis has been relatively well controlled since his diagnosis at 18 years old, with two flare-ups requiring steroids in the last 3 years. He has never needed hospital admission. He is currently in full time employment as an engineer.

He has been taking Pentasa (mesalazine) for two years, which is very well tolerated. On examination, his height is 180cm, and weight 58kg (body mass index 18 kg/m²). His abdomen is soft and non-tender. His last colonoscopy 8 months ago showed no active inflammation and no suspicious areas.

He is anxious as his father died from colorectal cancer in his 60's. There is no other family history of gastrointestinal disease. How regularly should he have a surveillance colonoscopy?

	Yearly
	3 years
	2 years
	4 years
	5 years

Dashboard

Overall score: 0%

1 -

□ Question 80 of 204

□ □

A 29 year old man with ulcerative colitis presents to clinic. His colitis has been relatively well controlled since his diagnosis at 18 years old, with two flare-ups requiring steroids in the last 3 years. He has never needed hospital admission. He is currently in full time employment as an engineer.

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He is anxious as his father died from colorectal cancer in his 60's. There is no other family history of gastrointestinal disease. How regularly should he have a surveillance colonoscopy?

	Yearly
	3 years
	2 years
	4 years
	5 years

Dashboard

Overall score: **0%****1** -

□ Question 81 of 204

□ □

A 38-year-old woman comes to the follow up clinic some 6 weeks after a small bowel resection for Crohn's disease. She is currently prescribed azathioprine and a tapering dose of corticosteroids. She smokes 10 cigarettes per day and endeavours to eat a normal diet. On examination her blood pressure is 115/78 mmHg, pulse is 70 beats per minute and regular. Cardiac and respiratory systems are unremarkable, abdomen is soft and non tender, with a midline scar consistent with the recent laparotomy. Her body mass index is 22 kg/m². Routine bloods are unremarkable.

Which of the following is most important with respect to reducing risk of future exacerbations?

	Anti-TNF biological therapy
	Gluten free diet
	Lactose free diet
	Oral mesalazine
	Smoking cessation

Dashboard

Overall score: 0%

1 -

□ Question 81 of 204

□ □

A 38-year-old woman comes to the follow up clinic some 6 weeks after a small bowel resection for Crohn's disease. She is currently prescribed azathioprine and a tapering dose of corticosteroids. She smokes 10 cigarettes per day and endeavours to eat a normal diet. On examination her blood pressure is 115/78 mmHg, pulse is 70 beats per minute and regular. Cardiac and respiratory systems are unremarkable, abdomen is soft and non tender, with a midline scar consistent with the recent laparotomy. Her body mass index is 22 kg/m². Routine bloods are unremarkable.

Which of the following is most important with respect to reducing risk of future exacerbations?

	Anti-TNF biological therapy
	Gluten free diet
	Lactose free diet
	Oral mesalazine
	Smoking cessation

Dashboard

Overall score: **0%****1** -

□ Question 82 of 204

□ □

A 62-year-old woman is investigated for chronic diarrhoea. She is currently opening her bowels 5-6 times a day. This is associated with episodes of central abdominal pain. Some of these episodes are severe and do not seem correlated with the episodes of diarrhoea. Her symptoms started around 6 months ago and have slowly been getting worse.

Clinical examination is unremarkable.

She is a non-smoker and drinks around 6 units of alcohol per week. Her past medical history includes depression and asthma.



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What is the most likely diagnosis?

	Crohn's disease
	Pancreatic cancer
	Chronic pancreatitis
	Ulcerative colitis
	Multiple endocrine neoplasia

Dashboard

Overall score: 0%

1 -

□ Question 82 of 204

□ □

A 62-year-old woman is investigated for chronic diarrhoea. She is currently opening her bowels 5-6 times a day. This is associated with episodes of central abdominal pain. Some of these episodes are severe and do not seem correlated with the episodes of diarrhoea. Her symptoms started around 6 months ago and have slowly been getting worse.

Clinical examination is unremarkable.

She is a non-smoker and drinks around 6 units of alcohol per week. Her past medical history includes depression and asthma.



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What is the most likely diagnosis?

	Crohn's disease
	Pancreatic cancer
	Chronic pancreatitis
	Ulcerative colitis
	Multiple endocrine neoplasia

Dashboard

Overall score: **0%**

1 -

Question 82 of 204

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She is a non-smoker and drinks around 6 units of alcohol per week. Her past medical history includes depression and asthma.



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What is the most likely diagnosis?

	Crohn's disease
	Pancreatic cancer
	Chronic pancreatitis
	Ulcerative colitis
	Multiple endocrine neoplasia

Dashboard

Overall score: 0%

1 -





Question 82 of 204

A 62-year-old woman is investigated for chronic diarrhoea. She is currently opening her bowels 5-6 times a day. This is associated with episodes of central abdominal pain. Some of these episodes are severe and do not seem correlated with the episodes of diarrhoea. Her symptoms started around 6 months ago and have slowly been getting worse.

Clinical examination is unremarkable.

She is a non-smoker and drinks around 6 units of alcohol per week. Her past medical history includes depression and asthma.



© Image used on license from Radiopaedia



What is the most likely diagnosis?

	Crohn's disease
	Pancreatic cancer
	Chronic pancreatitis
	Ulcerative colitis
	Multiple endocrine neoplasia

Dashboard

Overall score: 0%

1 -



Question 83 of 204

□ □

A 76-year-old man presents with jaundice. He is a heavy drinker, consuming approximately 35-40 units per week. There is no history of abdominal pain, and pain is not elicited on abdominal examination. However, examination does reveal a palpable gallbladder. Bloods are taken and the results are:

Albumin	30 g/L
Alk Phos	342 U/L
ALT	95 U/L
Bilirubin	102 mol/L
INR	1.4
Bilirubin	102 mol/L
GGT	123 U/L

Which of the following is the likely diagnosis?

<input type="checkbox"/>	Alcoholic hepatitis
<input type="checkbox"/>	Pancreatic cancer
<input type="checkbox"/>	Primary biliary cirrhosis
<input type="checkbox"/>	Paracetamol overdose
<input type="checkbox"/>	Gallstones

Dashboard

Overall score: 0%

Question 83 of 204

□ □

A 76-year-old man presents with jaundice. He is a heavy drinker, consuming approximately 35-40 units per week. There is no history of abdominal pain, and pain is not elicited on abdominal examination. However, examination does reveal a palpable gallbladder. Bloods are taken and the results are:

Albumin	30 g/L
Alk Phos	342 U/L
ALT	95 U/L
Bilirubin	102 mol/L
INR	1.4
Bilirubin	102 mol/L
GGT	123 U/L

Which of the following is the likely diagnosis?

	Alcoholic hepatitis
	Pancreatic cancer
	Primary biliary cirrhosis
	Paracetamol overdose
	Gallstones

Dashboard

Overall score: **0%**

□ Question 83 of 204

□ □

A 76-year-old man presents with jaundice. He is a heavy drinker, consuming approximately 35-40 units per week. There is no history of abdominal pain, and pain is not elicited on abdominal examination. However, examination does reveal a palpable gallbladder. Bloods are taken and the results are:

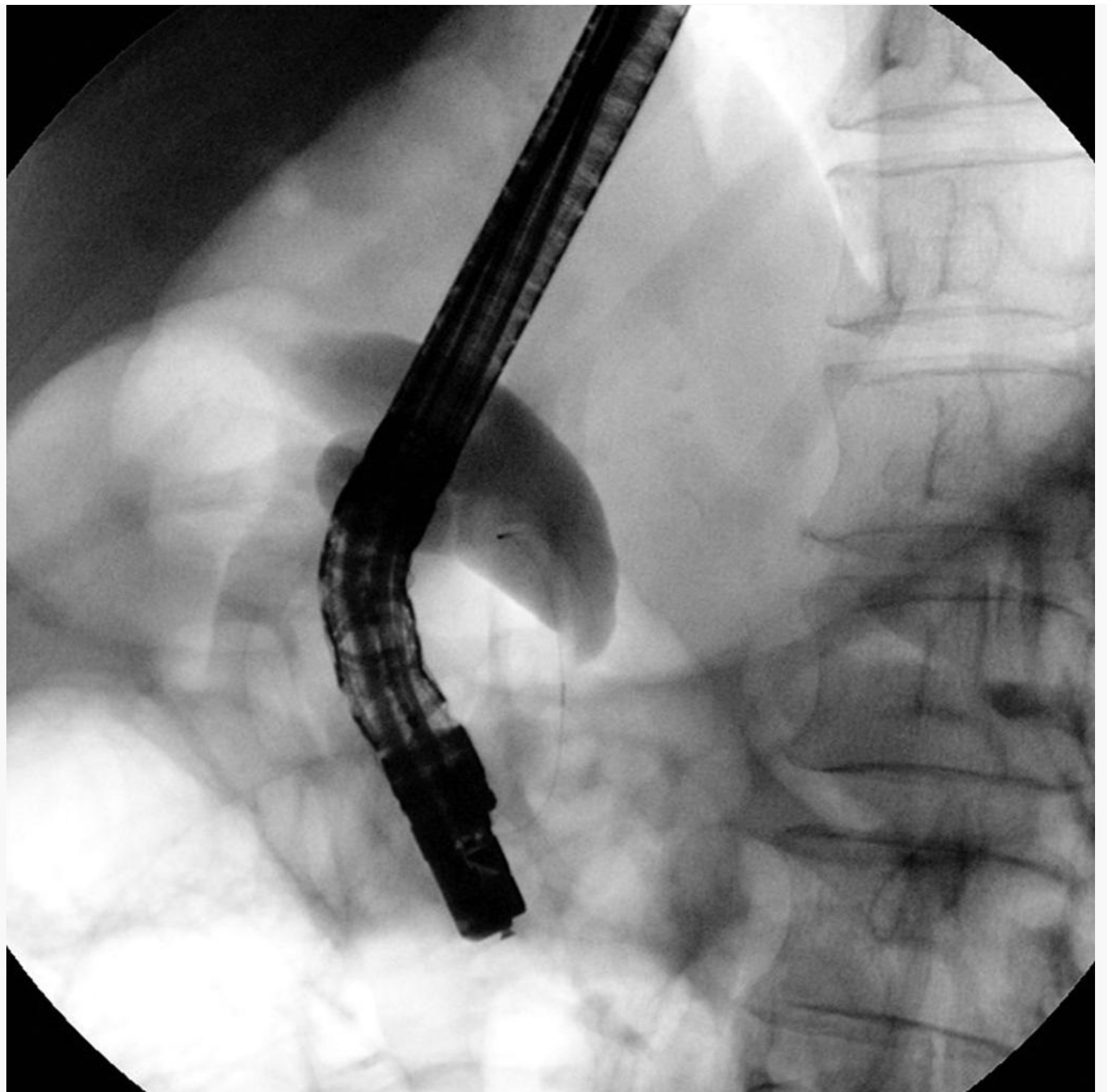
Albumin	30 g/L
Alk Phos	342 U/L
ALT	95 U/L
Bilirubin	102 mol/L
INR	1.4
Bilirubin	102 mol/L
GGT	123 U/L

Which of the following is the likely diagnosis?

	Alcoholic hepatitis
	Pancreatic cancer
	Primary biliary cirrhosis
	Paracetamol overdose
	Gallstones

Dashboard

Overall score: **0%**



☐ Question 84 of 204

A 75-year-old man is reviewed in gastroenterology clinic as part of on-going follow-up for Barrett's oesophagus. The patient had been referred by his GP 2 months previously due to long-standing symptoms of gastro-oesophageal reflux: specifically, heartburn following eating and acid reflux upon lying flat in bed. No red-flag features of upper gastrointestinal tract malignancy had been identified.

An initial endoscopy was performed with results as documented below. Following discussion of the histology results, the patient elected to undergo endoscopic radiofrequency ablation. The procedure was uncomplicated aside from some mild chest pain in the first few days of recovery.

The patient was otherwise in good health, with other past medical history including only hypertension and osteoarthritis of both knees. Regular medications included paracetamol, omeprazole, ramipril and bendroflumethiazide. The patient reported a previous adverse reaction to penicillin but could not recall the details of this event.

There was no family history of Barrett's oesophagus or oesophageal adenocarcinoma. The patient had never smoked and reported consuming 20 units of alcohol per week.

Report from initial endoscopy: minor hiatus hernia; 5 cm length of circumferential salmon-coloured epithelium extending above gastro-oesophageal junction; mild oesophagitis elsewhere; no mass lesion or ulceration in oesophagus or stomach; quadrant biopsies taken as per protocol.

Histology from endoscopic biopsies: all samples demonstrate flat intestinal metaplasia; mild dysplasia present in 4 of 8 samples; no high-grade dysplasia or adenocarcinoma.

Following successful endoscopic therapy, what is the appropriate schedule for follow-up surveillance endoscopy?

	Every 6 months for 2 years, then every 1 year thereafter
	Every 3 months for 1 year, then every 6 months for 1 year, then every 1 year thereafter
	Every 1 year
	Every 6 months for 1 year, then every 1 year thereafter

Every 3 years

Dashboard

Overall score: **0%**

1 -

□ Question 84 of 204



A 75-year-old man is reviewed in gastroenterology clinic as part of on-going follow-up for Barrett's oesophagus. The patient had been referred by his GP 2 months previously due to long-standing symptoms of gastro-oesophageal reflux: specifically, heartburn following eating and acid reflux upon lying flat in bed. No red-flag features of upper gastrointestinal tract malignancy had been identified.

An initial endoscopy was performed with results as documented below. Following discussion of the histology results, the patient elected to undergo endoscopic radiofrequency ablation. The procedure was uncomplicated aside from some mild chest pain in the first few days of recovery.

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There was no family history of Barrett's oesophagus or oesophageal adenocarcinoma. The patient had never smoked and reported consuming 20 units of alcohol per week.

Report from initial endoscopy: minor hiatus hernia; 5 cm length of circumferential salmon-coloured epithelium extending above gastro-oesophageal junction; mild oesophagitis elsewhere; no mass lesion or ulceration in oesophagus or stomach; quadrant biopsies taken as per protocol.

Histology from endoscopic biopsies: all samples demonstrate flat intestinal metaplasia; mild dysplasia present in 4 of 8 samples; no high-grade dysplasia or adenocarcinoma.

Following successful endoscopic therapy, what is the appropriate schedule for follow-up surveillance endoscopy?

	Every 6 months for 2 years, then every 1 year thereafter
	Every 3 months for 1 year, then every 6 months for 1 year, then every 1 year thereafter
	Every 1 year
	Every 6 months for 1 year, then every 1 year thereafter

Every 3 years

Dashboard

Overall score: **0%**

1 -

□ Question 84 of 204

A 75-year-old man is reviewed in gastroenterology clinic as part of ongoing management. The patient had been referred by his GP 2 months previously due to long-standing heartburn following eating and acid reflux upon lying flat. A gastro-oesophageal junction tract malignancy had been identified.

An initial endoscopy was performed with results as documented below. The patient elected to undergo endoscopic radiofrequency ablation. The patient reported chest pain in the first few days of recovery.

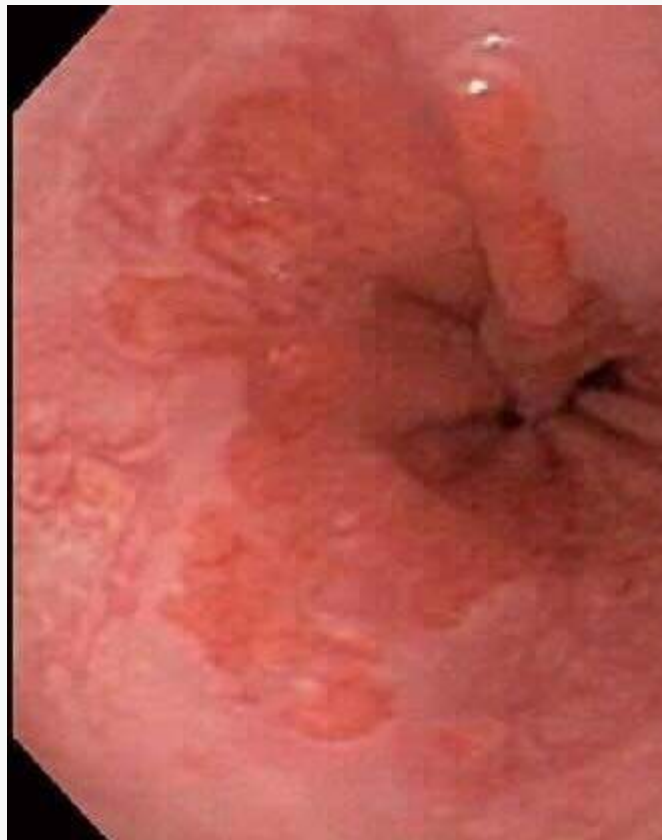
The patient was otherwise in good health, with other past medical history of both knees. Regular medications included paracetamol, omeprazole. The patient reported a previous adverse reaction to penicillin but could not recall details.

There was no family history of Barrett's oesophagus or oesophageal adenocarcinoma. The patient had never smoked and reported consuming 20 units of alcohol per week.

Report from initial endoscopy: minor hiatus hernia; 5 cm length of circumferential salmon-coloured epithelium extending above gastro-oesophageal junction; mild oesophagitis elsewhere; no mass lesion or ulceration in oesophagus or stomach; quadrant biopsies taken as per protocol.

Histology from endoscopic biopsies: all samples demonstrate flat intestinal metaplasia; mild dysplasia present in 4 of 8 samples; no high-grade dysplasia or adenocarcinoma.

Following successful endoscopic therapy, what is the appropriate schedule for follow-up surveillance endoscopy?



Every 6 months for 2 years, then every 1 year thereafter

Every 3 months for 1 year, then every 6 months for 1 year, then every 1 year thereafter

Every 1 year

Every 6 months for 1 year, then every 1 year thereafter

Dashboard

Overall score: **0%**

1 -

Question 85 of 204

□ □

A 30-year-old woman presents with intermittent episodes of mild jaundice. She states that she is otherwise well during these episodes but has noted that they tend to coincide with her period or occur when she has an upper respiratory tract infection. She states she thinks her mother has had similar episodes. Her blood test results are as follows.

Hb	120 g/l
Platelets	$220 \times 10^9/l$
WBC	$5.2 \times 10^9/l$

Urea	4.3 mmol/l
Creatinine	80 μ mol/l

Bilirubin	40 μ mol/l
ALP	50 u/l
ALT	35 u/l
γ GT	20 u/l
Albumin	40 g/l

What is the most likely diagnosis?

	Autoimmune hepatitis
	Hepatitis B
	Hepatitis C
	Gilberts syndrome

	Crigler-Najjar syndrome
--	-------------------------

Dashboard

Overall score: **0%**
1 -

Question 85 of 204

□ □

A 30-year-old woman presents with intermittent episodes of mild jaundice. She states that she is otherwise well during these episodes but has noted that they tend to coincide with her period or occur when she has an upper respiratory tract infection. She states she thinks her mother has had similar episodes. Her blood test results are as follows.

Hb	120 g/l
Platelets	220 * 10 ⁹ /l
WBC	5.2 * 10 ⁹ /l

Urea	4.3 mmol/l
Creatinine	80 µmol/l

Bilirubin	40 µmol/l
ALP	50 u/l
ALT	35 u/l
γGT	20 u/l
Albumin	40 g/l

What is the most likely diagnosis?

	Autoimmune hepatitis
	Hepatitis B
	Hepatitis C
	Gilberts syndrome

	Crigler-Najjar syndrome

Dashboard

Overall score: **0%**
1 -

Question 86 of 204

□ □

A 26-year-old woman presents to the Emergency department some 2 weeks after returning from her honeymoon in the Seychelles. Since returning she has suffered from intermittent abdominal bloating and diarrhoea and feels she has lost a little weight. Physical examination reveals a blood pressure of 118/82 mmHg, and her pulse is 70 and regular. There is mild abdominal distension and her body mass index is 22 kg/m²

Investigations:

Hb	110 g/l	Na ⁺	138 mmol/l
Platelets	210 * 10 ⁹ /l	K ⁺	4.0 mmol/l
WBC	11.2 * 10 ⁹ /l	Urea	6.9 mmol/l
Neuts	8.1 * 10 ⁹ /l	Creatinine	89 µmol/l
Lymphs	1.5 * 10 ⁹ /l	CRP	82 mg/l
Albumin	34 g/l		

Which of the following is the most appropriate intervention?

	Amoxicillin
	Ciprofloxacin
	Gluten free diet
	Lactose free diet
	Metronidazole

Overall score: **0%**

1 -

□ Question 86 of 204

□ □

A 26-year-old woman presents to the Emergency department some 2 weeks after returning from her honeymoon in the Seychelles. Since returning she has suffered from intermittent abdominal bloating and diarrhoea and feels she has lost a little weight. Physical examination reveals a blood pressure of 118/82 mmHg, and her pulse is 70 and regular. There is mild abdominal distension and her body mass index is 22 kg/m²

Investigations:

Hb	110 g/l	Na ⁺	138 mmol/l
Platelets	210 * 10 ⁹ /l	K ⁺	4.0 mmol/l
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Neuts	8.1 * 10 ⁹ /l	Creatinine	89 µmol/l
Lymphs	1.5 * 10 ⁹ /l	CRP	82 mg/l
Albumin	34 g/l		

Which of the following is the most appropriate intervention?

	Amoxicillin
	Ciprofloxacin
	Gluten free diet
	Lactose free diet
	Metronidazole

Dashboard

Overall score: **0%**

1 -

□ Question 87 of 204



A 60-year-old woman with a known history of alcohol dependency presents with a 4-hour history of haematemesis and abdominal discomfort. She has no history of upper GI bleed but does report several previous episodes of passing black stools. She has asthma and a family history of type II diabetes mellitus. A previous abdominal ultrasound has shown hepatic cirrhosis.

Today, she appears unwell. She continues to vomit small amounts of blood. On examination, her blood pressure is 120/85mmHg and pulse rate is 90 beats per minute. Her chest is clear and her abdomen is soft, though she has some epigastric tenderness. Rectal examination reveals melaena.

An intravenous cannula is inserted and blood is taken.

Blood tests show:

Hb	98 g/l
Platelets	$180 \times 10^9/l$
WBC	$6.3 \times 10^9/l$

Fibrinogen	2.3 g/L
APTT	30 seconds
PT	12.5 seconds

Na ⁺	142 mmol/l
K ⁺	4.9 mmol/l
Urea	10 mmol/l
Creatinine	100 μ mol/l

Fluids are started and arrangements are made to send the patient to the endoscopy suite.

What should be administered prior to endoscopy?

	Terlipressin
	Octreotide
	Platelets
	Packed red cells
	Fresh frozen plasma (FFP)

Dashboard

Overall score: 0%

1 -

□ Question 87 of 204



A 60-year-old woman with a known history of alcohol dependency presents with a 4-hour history of haematemesis and abdominal discomfort. She has no history of upper GI bleed but does report several previous episodes of passing black stools. She has asthma and a family history of type II diabetes mellitus. A previous abdominal ultrasound has shown hepatic cirrhosis.

Today, she appears unwell. She continues to vomit small amounts of blood. On examination, her blood pressure is 120/85mmHg and pulse rate is 90 beats per minute. Her chest is clear and her abdomen is soft, though she has some epigastric tenderness. Rectal examination reveals melaena.

An intravenous cannula is inserted and blood is taken.

Blood tests show:

Hb	98 g/l
Platelets	$180 \times 10^9/l$
WBC	$6.3 \times 10^9/l$

Fibrinogen	2.3 g/L
APTT	30 seconds
PT	12.5 seconds

Na ⁺	142 mmol/l
K ⁺	4.9 mmol/l
Urea	10 mmol/l
Creatinine	100 μ mol/l

Fluids are started and arrangements are made to send the patient to the endoscopy suite.

What should be administered prior to endoscopy?

	Terlipressin
	Octreotide
	Platelets
	Packed red cells
	Fresh frozen plasma (FFP)

Dashboard

Overall score: 0%

1 -

Question 88 of 204

A 62-year-old man who is an immigrant from Turkey is investigated for abnormal liver function tests. His most liver function tests show the following:

Bilirubin	42 $\mu\text{mol/l}$
ALP	221 u/l
ALT	98 u/l
γGT	131 u/l
Albumin	36 g/l

He does complain of an occasional dull ache in the right upper quadrant. A CT scan is requested:



Over the past two weeks he has also had recurrent episodes of an intensely itchy urticarial rash developing. These episodes typically last around 2 hours before settling and are helped by oral antihistamines.

What is the most likely diagnosis?

<input type="checkbox"/>	Budd-Chiari Syndrome
<input type="checkbox"/>	Amoebic liver abscess
<input type="checkbox"/>	Cysticercosis
<input type="checkbox"/>	Hepatocellular carcinoma
<input type="checkbox"/>	Hydatid cyst

Dashboard

Overall score: 0%

1 -

□ Question 88 of 204



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	Cysticercosis
	Hepatocellular carcinoma
	Hydatid cyst

Dashboard

Overall score: 0%

1 -

□ Question 88 of 204

□ □

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What is the most likely diagnosis?

	Budd-Chiari Syndrome
	Amoebic liver abscess
	Cysticercosis
	Hepatocellular carcinoma
	Hydatid cyst

Dashboard

Overall score: **0%**



□ Question 89 of 204



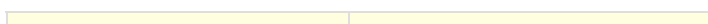
A 33-year-old lady was referred to the outpatient gastroenterology clinic by her GP who had diagnosed Irritable Bowel Syndrome refractory to symptomatic management. Her symptoms commenced six months ago with central abdominal cramping bloating made worse with eating wheat and oat based foods. She also noticed that the onset of the abdominal cramping was often associated with faecal urgency. Despite a prolonged trial of mebeverine, hyoscine butylbromide and peppermint oil there was no improvement in her symptoms. Her symptoms were however alleviated by avoiding the precipitating foods. She had not lost any weight and did not pass any blood per rectum; other than a family history of maternal depression there was no family history of note. Her past medical history was comprised depression for which she was prescribed citalopram 40mg OD; this was increased recently following worsening of her mood over the last few weeks.

Examination revealed the presence of a well 33-year-old lady. Her blood pressure was 112/72mmHg, heart rate 78 bpm and temperature 36.6°C. Examination of her cardiovascular and respiratory systems was unremarkable. Examination of her gastrointestinal system was similarly unremarkable with no organomegaly, normal bowel sounds and the absence of lymphadenopathy. Examination of her forearms revealed the presence of multiple superficial lacerations.

Investigations conducted by her GP are as shown:

Hb	105 g/l
MCV	81 fl
Platelets	224 * 10 ⁹ /l
WBC	8.2 * 10 ⁹ /l

Bilirubin	19 µmol/l
ALP	142 u/l
ALT	33 u/l
Protein	81 g/l
Albumin	39 g/l



ESR	9 mm/hr
CRP	12 mg/l
TSH	0.75 (NR 0.4-3.6mu/ml)
FT4	11.6 (NR 4.5-13.6 mcg/dl)
IgG	7.2 (NR 5.8-15.4g/l)
IgA	0.2 (NR 0.64-2.97g/l)
IgM	1.2 (0.75-2.20g/l)
B12	224 (NR 160-900 ng/l)
Anti-endomysial antibody	negative

What is the next most appropriate management option?

<input type="radio"/>	Organise oesophageal motility studies
<input type="radio"/>	Organise upper GI endoscopy and biopsy
<input type="radio"/>	Commence trial with low dose amitriptyline
<input type="radio"/>	Commence gluten exclusion diet
<input type="radio"/>	Commence trial with domperidone

Dashboard

Overall score: **0%**

1 -

□ Question 89 of 204



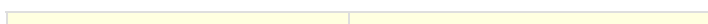
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IgA	0.2 (NR 0.64-2.97g/l)
IgM	1.2 (0.75-2.20g/l)
B12	224 (NR 160-900 ng/l)
Anti-endomysial antibody	negative

What is the next most appropriate management option?

	Organise oesophageal motility studies
	Organise upper GI endoscopy and biopsy
	Commence trial with low dose amitriptyline
	Commence gluten exclusion diet
	Commence trial with domperidone

Dashboard
Overall score: 0% 1 -

□ Question 89 of 204

□ □

A 33-year-old lady was referred to the outpatient gastroenterology clinic by her GP who had diagnosed Irritable Bowel Syndrome refractory to symptomatic management. Her symptoms commenced six months ago with central abdominal cramping bloating made worse with eating wheat and oat based foods. She also noticed that the onset of the abdominal cramping was often associated with faecal urgency. Despite a prolonged trial of mebeverine, hyoscine butylbromide and peppermint oil there was no improvement in her symptoms. Her symptoms were however alleviated by avoiding the precipitating foods. She had not lost any weight and did not pass any blood per rectum; other than a family history of maternal depression there was no family history of note. Her past medical history was comprised depression for which she was prescribed citalopram 40mg OD; this was increased recently following worsening of her mood over the last few weeks.

Examination revealed the presence of a well 33-year-old lady. Her blood pressure was 112/72mmHg, heart rate 78 bpm and temperature 36.6°C. Examination of her cardiovascular and respiratory systems was unremarkable. Examination of her gastrointestinal system was similarly unremarkable with no organomegaly, normal bowel sounds and the absence of lymphadenopathy. Examination of her forearms revealed the presence of multiple superficial lacerations.

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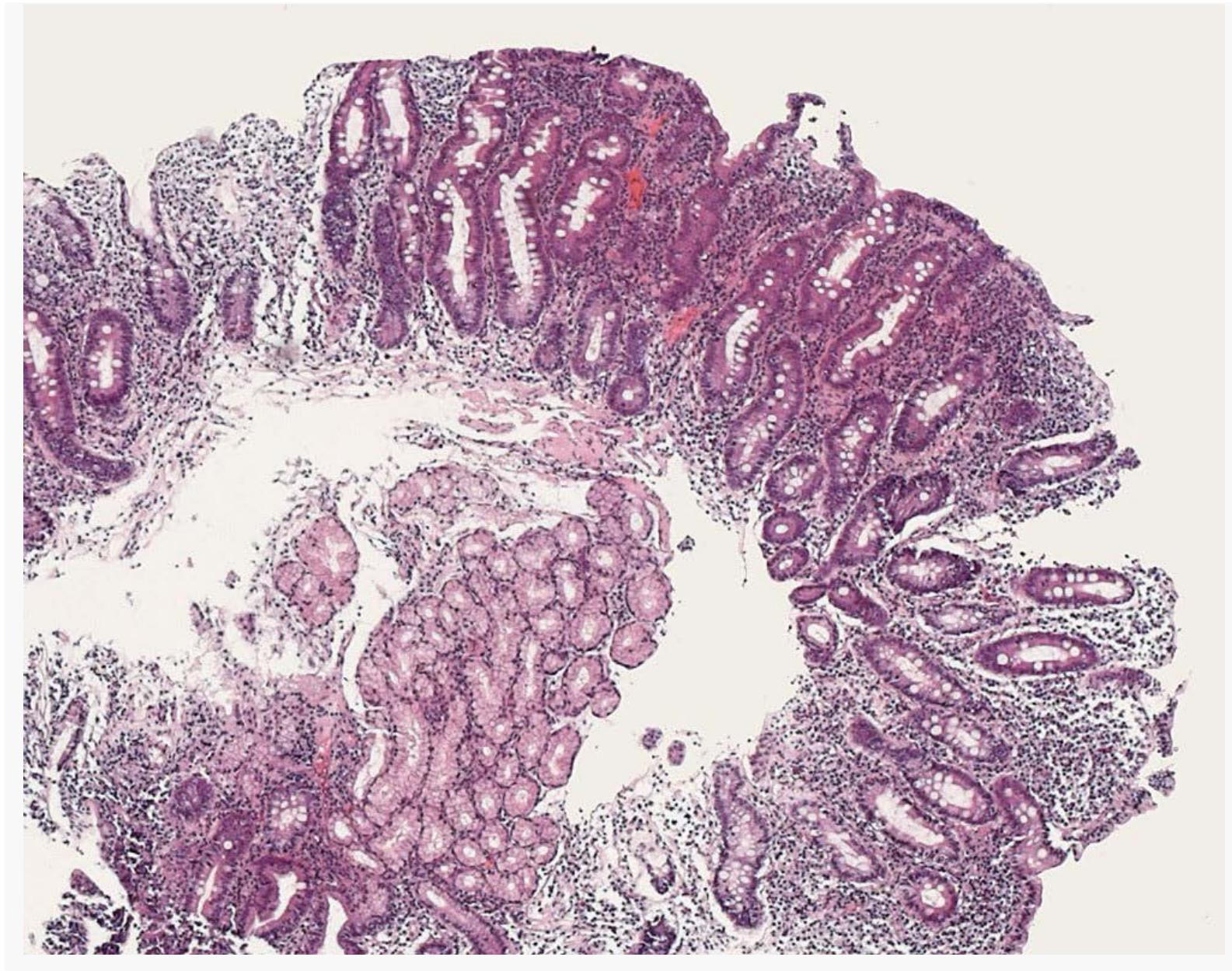
ESR	9 mm/hr
CRP	12 mg/l

TSH	0.75 (NR 0.4-3.6mu/ml)
FT4	11.6 (NR 4.5-13.6 mcg/dl)
IgG	7.2 (NR 5.8-15.4g/l)
IgA	0.2 (NR 0.64-2.97g/l)
IgM	1.2 (0.75-2.20g/l)
B12	224 (NR 160-900 ng/l)
Anti-endomysial antibody	negative

What is the next most appropriate management option?

<input type="radio"/>	Organise oesophageal motility studies
<input checked="" type="radio"/>	Organise upper GI endoscopy and biopsy
<input type="radio"/>	Commence trial with low dose amitriptyline
<input type="radio"/>	Commence gluten exclusion diet
<input type="radio"/>	Commence trial with domperidone

Dashboard
<p>Overall score: 0%</p> <p>1 -</p>



Question 89 of 204

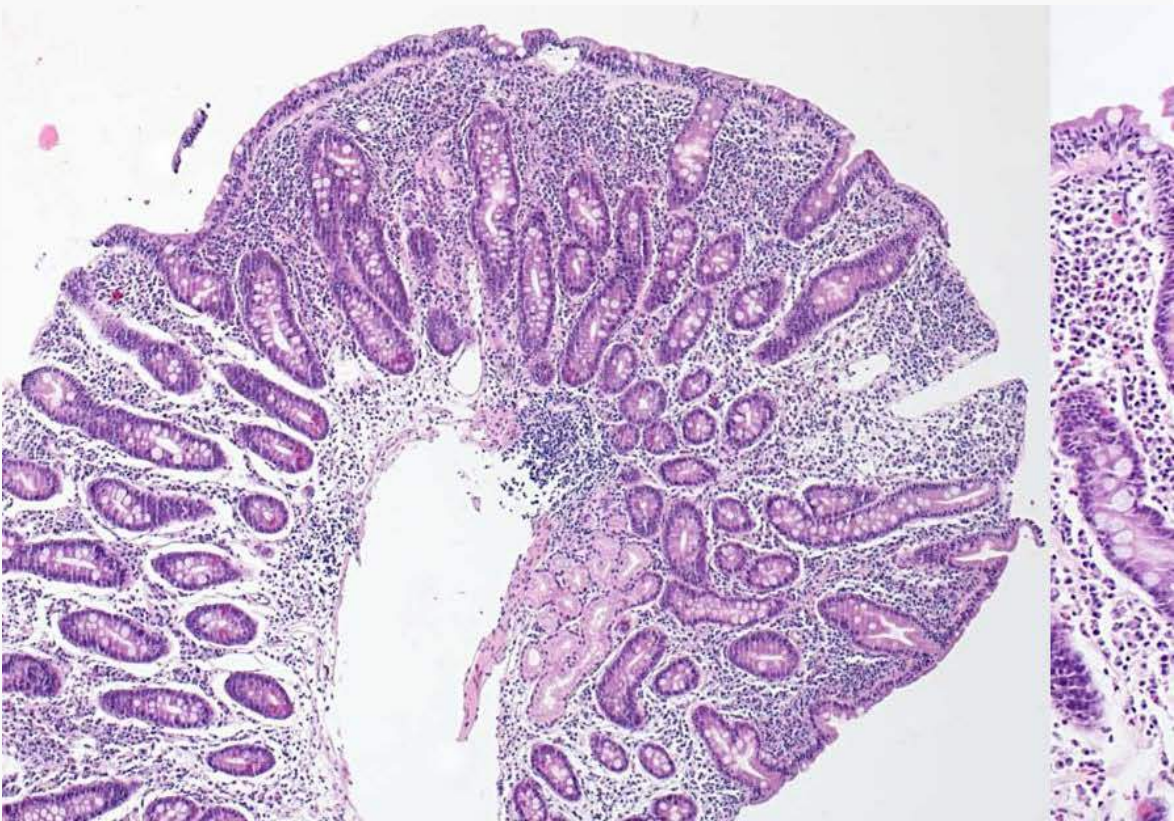
A 33-year-old lady was referred with Irritable Bowel Syndrome refractory to symptom management. She had bloating, cramping, and constipation. Bloating was often associated with cramping. She had tried peppermint oil but there was no improvement. She had no precipitating foods. She had a history of maternal depression and was prescribed citalopram for 6 weeks.

Examination revealed the patient was afebrile and temperature 36.6°C. Examination of her gastrointestinal system was similarly unremarkable with no organomegaly, normal bowel sounds and the absence of lymphadenopathy. Examination of her forearms revealed the presence of multiple superficial lacerations.

Investigations conducted by her GP are as shown:

Hb	105 g/l
MCV	81 fl
Platelets	224 * 10 ⁹ /l
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Anti-endomysial antibody	negative

What is the next most appropriate management option?

	Organise oesophageal motility studies
	Organise upper GI endoscopy and biopsy
	Commence trial with low dose amitriptyline
	Commence gluten exclusion diet
	Commence trial with domperidone

Dashboard
Overall score: 0% 1 -

□ Question 90 of 204

□ □

A 45 year old man admitted to the gastroenterology ward to detox from excessive alcohol consumption. He is known to have alcohol dependence syndrome but has no other past medical history and no known diagnosis of alcoholic cirrhosis. On examination he is noted to have a distended abdomen with evidence of shifting dullness and a succussion splash. He is taken down for an ultrasound of his abdomen and an appropriate site for an ascitic tap is marked in the left iliac fossa by the radiologist. Before doing the ascitic tap you check his bloods from today, they are as follows:

Hb	83 g/l
Platelets	$56 \times 10^9/l$
WBC	$3.5 \times 10^9/l$

Na ⁺	128 mmol/l
K ⁺	3.2 mmol/l
Urea	2.2 mmol/l
Creatinine	45 μ mol/l

Bilirubin	35 μ mol/l
ALP	145 u/l
ALT	24 u/l
Albumin	32 g/l

INR	1.8
APTT	55 s
Fibrinogen	1.3 g/L

Before doing an ascitic tap, what needs to be done?

	1 unit of red blood cells
	FFP till fibrinogen >1.5
	IV vitamin K till INR <1.5
	Nothing - the parameters are adequate
	1 pool of platelets

Dashboard

Overall score: **0%**

1 -

□ Question 90 of 204

□ □

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Before doing an ascitic tap, what needs to be done?

	1 unit of red blood cells
	FFP till fibrinogen >1.5
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	Nothing - the parameters are adequate
	1 pool of platelets

Dashboard

Overall score: **0%**

1 -

Question 91 of 204

□ □

A 31-year-old gentleman, with known ulcerative colitis, presents with a three-day history of profuse bloody diarrhoea. He reports opening his bowels up to 12 times each day and describes passing both bloody stool and frank blood.

On examination he is pale. His heart rate is 95 beats per minute, respiratory rate 16 breaths per minute, blood pressure 128/78 mmHg. His chest is clear to auscultation and his abdomen is soft but diffusely tender. The patient is ambulant and despite his diarrhoea appears relatively well.

The patient is diagnosed with a flare of his ulcerative colitis. Intravenous access is obtained and fluids and intravenous steroids given.

Admission bloods show:

Hb	102 g/l
Platelets	$556 \times 10^9/l$
WBC	$17.5 \times 10^9/l$
ESR	78 mm/h

Regarding his venous thromboembolism prophylaxis, what should happen during this admission?

	Compression stockings only
	No prophylaxis due to active bleeding
	Intermittent pneumatic compression devices
	Prophylactic dose low molecular weight heparin and compression stockings
	Treatment dose low molecular weight heparin and compression stockings

Overall score: **0%**

1 -

□ Question 91 of 204

□ □

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	Treatment dose low molecular weight heparin and compression stockings

Overall score: **0%**

1 -

□ Question 92 of 204

□ □

A 42-year-old lady with known longstanding Crohn's disease was referred to the gastroenterology clinic. She presented to her GP with an 8-month history of tiredness. Since then she has developed loose stools with vague persistent abdominal pains with bloating and weight loss of approximately 4kg over the corresponding period. Her symptoms were initially attributed to irritable bowel syndrome but despite a trial of mebeverine 135mg TDS and loperamide 2mg PRN her symptoms persisted. She stated that her Crohn's disease was well controlled for several years with mesalazine 500mg TDS. In addition to Crohn's disease, she also had a past medical history of asthma and eczema for which she was prescribed mesalazine, Clenil modulite 200mcg BD, salbutamol PRN and Diprobase cream. She consumes 28 units of alcohol per week and is a non-smoker.

On examination, she appeared pale but otherwise well. She had a temperature of 37.3°C, a heart rate of 88/min and a blood pressure of 122/78 mmHg. Examination of the cardiovascular and neurological system was unremarkable. Examination of the gastrointestinal system likewise was unremarkable with no organomegaly and a soft non-tender abdomen.

Investigations revealed the following results:

Hb	86 g/l
MCV	112 fl
Platelets	342 * 10 ⁹ /l
WBC	7.2 * 10 ⁹ /l
TSH	1.96 u/l
B12	64 ng/l (160-900)
Folate	28 mcg/l (3-20)

Gastroscopy: normal appearance

Colonoscopy: normal appearance

Capsule endoscopy: jejunal strictures and fistulae

Schilling test: Prior to administration of intrinsic factor 1% B12 isotope excreted

Post-administration of intrinsic factor 1% B12 isotope excreted

What is the most likely diagnosis?

	Bacterial overgrowth
	Blind loop syndrome
	Pernicious anaemia
	Terminal ileal disease
	Vegan diet

Dashboard

Overall score: 0%

1 -

□ Question 92 of 204

□ □

A 42-year-old lady with known longstanding Crohn's disease was referred to the gastroenterology clinic. She presented to her GP with an 8-month history of tiredness. Since then she has developed loose stools with vague persistent abdominal pains with bloating and weight loss of approximately 4kg over the corresponding period. Her symptoms were initially attributed to irritable bowel syndrome but despite a trial of mebeverine 135mg TDS and loperamide 2mg PRN her symptoms persisted. She stated that her Crohn's disease was well controlled for several years with mesalazine 500mg TDS. In addition to Crohn's disease, she also had a past medical history of asthma and eczema for which she was prescribed mesalazine, Clenil modulite 200mcg BD, salbutamol PRN and Diprobase cream. She consumes 28 units of alcohol per week and is a non-smoker.

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Capsule endoscopy: jejunal strictures and fistulae

Schilling test: Prior to administration of intrinsic factor 1% B12 isotope excreted

Post-administration of intrinsic factor 1% B12 isotope excreted

What is the most likely diagnosis?

	Bacterial overgrowth
	Blind loop syndrome
	Pernicious anaemia
	Terminal ileal disease
	Vegan diet

Dashboard

Overall score: **0%**
1 -

□ Question 93 of 204

□ □

A 42-year-old man presents to the emergency department due to bleeding from hair follicles on his head. He has also noticed that he has been off his food and losing weight. He is currently homeless after having been made redundant from his job one year ago. He is alcohol dependent with 30-units per week of hard liquor. He is not confused.

He has a past medical history of tuberculosis, for which he completed treatment six months. This treatment finished two months ago. On examination, he appears unkempt with poor oral hygiene and gingivitis. He has global muscle weakness rated at 4+/5 on the MRC scale. There is no sensory impairment. What is the most likely diagnosis?

	Pellagra
	Scurvy
	Beriberi
	Wernicke-Korsakoff syndrome
	Recurrence of tuberculosis

Dashboard

Overall score: 0%

1 -

□ Question 93 of 204

□ □

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	Scurvy
	Beriberi
	Wernicke-Korsakoff syndrome
	Recurrence of tuberculosis

Dashboard

Overall score: **0%****1** -

Question 94 of 204



A 21-year-old female presents for the first time with crampy right iliac fossa pain and diarrhoea. Colonoscopy shows patchy erythema in what appears to be a cobblestone appearance in her caecum and terminal ileum. She refuses to take prednisolone as her mother had taken it previously and had some particularly 'nasty' side-effects.

What is the next best agent to offer?

	Mercaptopurine
	Budesonide
	Azathioprine
	Methotrexate
	Infliximab

Dashboard

Overall score: **0%**

1 -

Question 94 of 204

□ □

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What is the next best agent to offer?

	Mercaptopurine
	Budesonide
	Azathioprine
	Methotrexate
	Infliximab

Dashboard

Overall score: **0%**

1 -

Question 1 of 110

A 30-year-old lady presents with shortness of breath and facial flushing. She had been to a restaurant that evening and noticed the symptoms when rushing home. She also had itchy skin and tingling lips. On examination she was tachycardic with a wheeze. She had no history of food allergies and reported eating lasagne for dinner alongside a glass of wine. What is the most likely diagnosis?

<input type="checkbox"/>	Acute asthma attack
<input type="checkbox"/>	Carcinoid syndrome
<input type="checkbox"/>	Exercise induced wheat angioedema
<input type="checkbox"/>	Shellfish anaphylaxis
<input type="checkbox"/>	Thyrotoxicosis

Dashboard

Overall score: **0%**

1 -

Question 1 of 110

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	Acute asthma attack
	Carcinoid syndrome
	Exercise induced wheat angioedema
	Shellfish anaphylaxis
	Thyrotoxicosis

Dashboard

Overall score: **0%**

1 -

□ Question 2 of 110

□ □

A 32-year-old patient who is 10 weeks pregnant attends for her antenatal booking clinic. This is her first pregnancy, and she tells you she has been feeling lethargic and has a poor appetite. She has no past medical history of note.

On examination, she looks pale and appears comfortable at rest. Her chest is clear, heart sounds I&II are present and her abdomen is soft non-tender. She has some oedema of both ankles bilaterally. Her blood pressure is 111/75 mmHg and her heart rate is 79/min.

Investigations in clinics are as follows:

Hb	94 g/l
MCV	69 fl
Platelets	$168 \times 10^9/l$
WBC	$9.1 \times 10^9/l$
Hb electrophoresis	positive HbA2
Rhesus	negative
Blood Group	AB

Na ⁺	139 mmol/l
K ⁺	3.9 mmol/l
Urea	7.6 mmol/l
Creatinine	99 μ mol/l

What is the single most likely underlying condition?

	Alpha thalassaemia trait

	Beta thalassaemia trait
	Beta thalassemia major
	Iron deficiency anaemia
	Sideroblastic anaemia

Dashboard

Overall score: **0%**
1 -

Question 2 of 110

□ □

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What is the single most likely underlying condition?

Alpha thalassaemia trait

	Beta thalassaemia trait
	Beta thalassemia major
	Iron deficiency anaemia
	Sideroblastic anaemia

Dashboard

Overall score: **0%**
1 -

Question 3 of 110

A 27-year-old woman is admitted after developing dyspnoea associated with pleuritic chest pain. A D-dimer taken on admission is elevated and subsequent CTPA shows a pulmonary embolism. Her past medical history includes a giving birth to her son 12 months ago (full term, vaginal delivery) and anxiety. She reports that her 47-year-old mother has had two deep vein thromboses in the past 10 years. Which one of the following is the most likely underlying cause?

<input type="checkbox"/>	Factor V Leiden
<input type="checkbox"/>	Antithrombin III deficiency
<input type="checkbox"/>	Antiphospholipid syndrome
<input type="checkbox"/>	Protein C deficiency
<input type="checkbox"/>	Prothrombin gene mutation

Dashboard

Overall score: 0%

1 -

□ Question 3 of 110

□ □

A 27-year-old woman is admitted after developing dyspnoea associated with pleuritic chest pain. A D-dimer taken on admission is elevated and subsequent CTPA shows a pulmonary embolism. Her past medical history includes a giving birth to her son 12 months ago (full term, vaginal delivery) and anxiety. She reports that her 47-year-old mother has had two deep vein thromboses in the past 10 years. Which one of the following is the most likely underlying cause?

	Factor V Leiden
	Antithrombin III deficiency
	Antiphospholipid syndrome
	Protein C deficiency
	Prothrombin gene mutation

Dashboard

Overall score: **0%**

1 -

□ Question 4 of 110

□ □

A 50-year-old male patient presents with symptoms of unilateral leg swelling. Despite having no predisposing factors for a DVT in his history he is diagnosed as having an above knee thrombosis on Doppler ultrasound. Low molecular weight heparin is started at a treatment dose.

Given the information above what is/are the next most important investigations?

	CTPA
	Thrombophilia screen
	Chest X-ray and urinalysis
	CT head
	Thyroid and liver function tests

Dashboard

Overall score: 0%

1 -

□ Question 4 of 110

□ □

A 50-year-old male patient presents with symptoms of unilateral leg swelling. Despite having no predisposing factors for a DVT in his history he is diagnosed as having an above knee thrombosis on Doppler ultrasound. Low molecular weight heparin is started at a treatment dose.

Given the information above what is/are the next most important investigations?

	CTPA
	Thrombophilia screen
	Chest X-ray and urinalysis
	CT head
	Thyroid and liver function tests

Dashboard

Overall score: **0%**

1 -

Question 5 of 110

□ □

A 26-year-old gentleman presents to haematology clinic one week prior to starting chemotherapy for acute myeloid leukaemia (AML). He is currently feeling fatigued, suffering from night sweats, and has chronic lower back pain. He is anxious to start treatment. His past medical history includes ankylosing spondylitis and a clavicular fracture. His current medications include paracetamol and ibuprofen.

Blood tests:

Hb	113 g/l
Platelets	$156 \times 10^9/l$
WBC	$57 \times 10^9/l$
Na ⁺	140 mmol/l
K ⁺	3.6 mmol/l
Urea	4.2 mmol/l
Creatinine	63 μ mol/l

What measure is the least useful to prevent tumour lysis syndrome?

	IV fluids prior to chemotherapy
	Urine alkalization
	Prophylactic allopurinol
	Prophylactic rasburicase
	Stopping NSAID use

Overall score: **0%**

1 -

□ Question 5 of 110

□ □

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	Urine alkalization
	Prophylactic allopurinol
	Prophylactic rasburicase
	Stopping NSAID use

Overall score: **0%**

1 -

□ Question 6 of 110

□ □

A 68-year-old patient is referred to the on-call medical team by their General Practitioner (GP) when they are found to have low Haemoglobin (Hb) on a routine set of blood tests taken for fatigue. The results, repeated in hospital, are as follows:

Hb	72 g/l
MCV	69 fl
Platelets	351 * 10 ⁹ /l
Film comment	Microcytic hypochromic red cells with pencil cells and target cells

You assess the patient and they give no history suggestive of bleeding. On examination, they are haemodynamically stable with no melaena. Which of the following would be the strongest indication for transfusion in this patient?

	A history of exertional angina
	A history of myocardial infarction treated with angioplasty
	A history of exertional dyspnoea
	A history of worsening fatigue
	A history of myelodysplastic syndrome

Dashboard

Overall score: 0%

1 -

□ Question 6 of 110

□ □

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	A history of exertional dyspnoea
	A history of worsening fatigue
	A history of myelodysplastic syndrome

Dashboard

Overall score: 0%

1 -

Question 7 of 110



You are looking after a 76-year-old man on an orthogeriatric ward. He is day 7 post dynamic hip screw for neck of femur fracture. He appears to be doing relatively well, but the nurse has noticed that he has a dark black necrotic looking skin over his left iliac fossa, and has asked you to come and look at it.

His past medical history includes hypertension, mild chronic kidney disease and atrial fibrillation.

He is currently on Ramipril 2.5mg once daily, Bisoprolol 5mg once daily, and treatment dose Clexane (patient was on Warfarin pre-operatively).

Pre-admission operative bloods:

Hb	142 g/l
Platelets	$212 \times 10^9/l$
WBC	$14.1 \times 10^9/l$

Na ⁺	138 mmol/l
K ⁺	4.6 mmol/l
Urea	8.2 mmol/l
Creatinine	167 μ mol/l

Bloods yesterday:

Hb	112 g/l
Platelets	$27 \times 10^9/l$
WBC	$10.1 \times 10^9/l$

Na ⁺	136 mmol/l
-----------------	------------

K ⁺	4.0 mmol/l
Urea	9.1 mmol/l
Creatinine	182 µmol/l

What should you do with regards to his Clexane?

	Stop Clexane and give Warfarin (target INR 2-3)
	Stop Clexane and give treatment dose Argatroban
	Switch treatment dose Clexane to Unfractionated Heparin infusion
	Give 1 pool of platelets
	Switch treatment dose Clexane to prophylactic Clexane

Dashboard

Overall score: 0%

1 -

Question 7 of 110



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Dashboard

Overall score: **0%**

1 -

□ Question 8 of 110



A 76-year-old man presented with shortness of breath to the emergency department. On the basis of a recent knee replacement operation and unremarkable chest x-ray a CT pulmonary angiogram was performed and demonstrated a segmental pulmonary embolus with evidence of mild right heart strain. The patient was haemodynamically stable and required only minimal supplemental oxygen therapy.

The patient had known chronic kidney disease stage IV secondary to type 2 diabetes and hypertension. Treatment was therefore initiated with an intravenous unfractionated heparin infusion.

The patient's condition was stable over the following week with warfarin loading cautiously started at day 6 of admission. Routine blood tests at this point indicated a new abnormality in full blood count leading to further investigations as detailed below.

Haemoglobin	14.5 g / dL
White blood cells	8.6×10^3 / microlitre
Neutrophils	4.5×10^3 / microlitre
Lymphocytes	2.1×10^3 / microlitre
Platelets	67×10^3 / microlitre
Mean cell volume	85 fL
Mean cell haemoglobin	30.1 pg
B12	252 pmol / L
Folate	20 nmol / L

Heparin induced thrombocytopenia antibodies: positive (high titre)

Following cessation of IV heparin infusion, what is the appropriate management of the patient's thrombocytopenia?

	Bivalirudin

	Enoxaparin
	Warfarin
	Tirofiban
	Platelet transfusion

Dashboard

Overall score: **0%**
1 -

□ Question 8 of 110



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	Enoxaparin
	Warfarin
	Tirofiban
	Platelet transfusion

Dashboard

Overall score: **0%**
1 -

□ Question 9 of 110



You are asked to review a 75-year-old lady on the surgical ward. She has malignant carcinoma of the colon and had a large bowel resection seven days ago. Despite being on dalteparin since admission, she had developed a right-sided deep venous thrombosis (DVT). She tells you she had a similar problem ten years ago and had to take 'blood-thinning injections' for several months.

On examination she looks well with no signs of respiratory distress. Her oxygen saturations are 99% on room air and on auscultation she has vesicular breath sounds throughout both lung fields.

Her pre-operative blood tests are as following:

Hb	119 g/l	Na ⁺	135 mmol/l	Bilirubin	12 mol/l
Platelets	457 * 10 ⁹ /l	K ⁺	4.5 mmol/l	ALP	111 u/l
WBC	6.8 * 10 ⁹ /l	Urea	4.9 mmol/l	ALT	45 u/l
Neuts	4.0 * 10 ⁹ /l	Creatinine	81 µmol/l	γGT	30 u/l
Lymphs	0.9 * 10 ⁹ /l			Albumin	34 g/l
Eosin	0.0 * 10 ⁹ /l				

Her blood results today are as follows:

Hb	105 g/l	Na ⁺	133 mmol/l	Prothrombin time	10.7 s
Platelets	77 * 10 ⁹ /l	K ⁺	4.1 mmol/l	APTT	27.5s
WBC	7.6 * 10 ⁹ /l	Urea	5.7 mmol/l	APTT ratio	45 u/l
Neuts	4.9 * 10 ⁹ /l	Creatinine	98 µmol/l	D-Dimer	>1000 ng/ml
Lymphs	1.1 * 10 ⁹ /l			Albumin	31 g/l
Eosin	0.1 * 10 ⁹ /l				

Which of the following represents the optimal management for this patient whilst she remains an inpatient?

	Warfarin
	Bivalirudin
	IV heparin infusion
	Plasma exchange
	Rivaroxaban

Dashboard

Overall score: 0%

1 -

Question 9 of 110



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	Warfarin
	Bivalirudin
	IV heparin infusion
	Plasma exchange
	Rivaroxaban

Dashboard

Overall score: 0%

1 -

□ Question 10 of 110

□ □

A 64-year-old man referred by the emergency department has fluctuating confusion and a severe headache of 4-hour duration. His only past history is a deep vein thrombosis 3 months ago for which he takes rivaroxaban 20mg OD.

On examination, he is orientated to person but cannot recall the time or where he is. There is no evidence of head injury. Temperature is 36.5 degrees, pulse 90 bpm, blood pressure 149/80 mmHg. A brief examination of the peripheral nervous system elicits no abnormal signs and his pupils are size 3 and equal.

An urgent CT head shows blood in the ventricular system.

What is the best immediate management to limit the bleeding?

	Vitamin K 10mg IV
	Pooled platelets
	Prothrombin complex concentrate (PCC)
	Haemofiltration
	Fresh frozen plasma (FFP) 15mls/kg

Dashboard

Overall score: 0%

1 -

□ Question 10 of 110

□ □

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Dashboard

Overall score: **0%****1** -

Question 11 of 110



A 23-year-old medical student went to Uganda on his elective but has had to return to the UK early due to illness. He had been careful to take malaria prophylaxis and slept under a mosquito net. He was using primaquine due to previous intolerable side effects with doxycycline. He was complaining of central abdominal pain and had noticed jaundiced sclera in the few days prior to returning to the UK. There is no relevant past medical history and he takes no regular medication. He is a non-smoker and drinks 2-4 units of alcohol weekly.

Observations show a blood pressure of 110/73 mmHg and heart rate of 98 beats per minute. He is afebrile, has a respiratory rate of 16 per minute and oxygen saturations of 94% on room air.

On examination, he is pale and jaundiced with yellow sclera. There is no cyanosis. His chest sounds clear and heart sounds are normal with no added. The abdomen is soft, generally tender but with no guarding or peritonism. Bowel sounds are normal.

Bloods show the following:

Haemoglobin	86 g/L	Sodium	139 mmol/L
Platelets	188 $\times 10^9/L$	Potassium	3.6 mmol/L
White cell count	11.0 $\times 10^9/L$	Urea	3.0 mmol/L
Neutrophils	8.5 $\times 10^9/L$	Creatinine	62 micromol/L
Reticulocytes	11%	Albumin	34 g/L
CRP	7 mg/L	Bilirubin	67 micromol/L
ALT	21 iu/L		
Alkaline Phosphatase	40 iu/L		

Peripheral blood film:

- Heinz bodies seen with methyl violet staining.
- Bite and blister cells also present.

What is the most likely diagnosis?

	G6PD deficiency
	<i>Plasmodium falciparum</i> infection
	<i>Mycoplasma pneumoniae</i>
	Hereditary spherocytosis
	Lead poisoning

Dashboard

Overall score: 0%

1 -

Question 11 of 110



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Peripheral blood film:

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	<i>Mycoplasma pneumoniae</i>
	Hereditary spherocytosis
	Lead poisoning

Dashboard

Overall score: 0%

1 -

Question 11 of 110

A 23-year-old medical student had been careful to take medication without any intolerable side effects with the exception of a rash in the few days prior to returning to his medication. He is a non-smoker.

Observations show a blood pressure of 120/80 mmHg and a respiratory rate of 16 per minute.

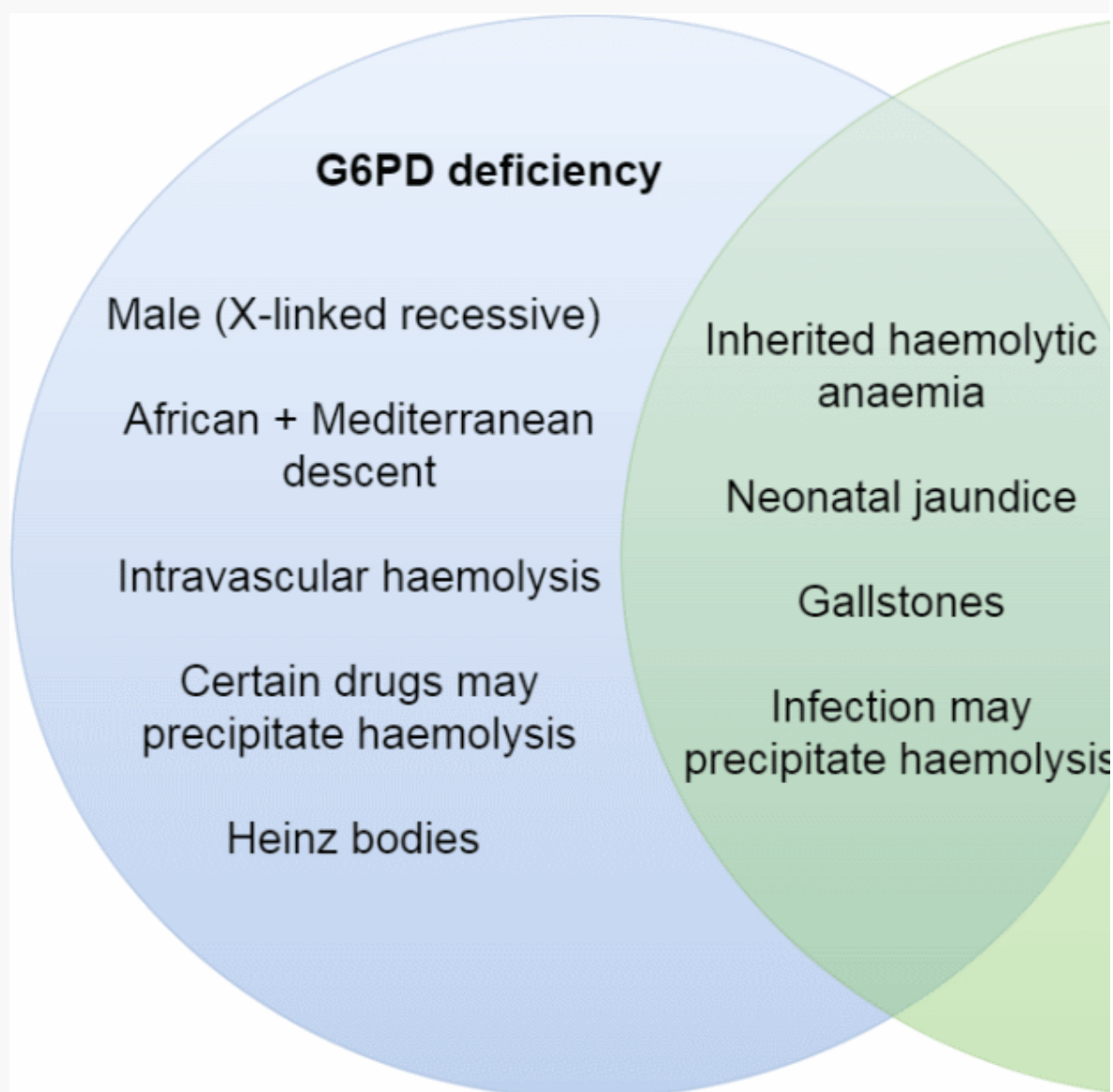
On examination, he is pale and has a mild fever. Heart sounds are normal with nil murmurs. Lung sounds are normal.

Bloods show the following:

Haemoglobin	86 g/L		
Platelets	$188 \times 10^9/L$	Potassium	3.6 mmol/L
White cell count	$11.0 \times 10^9/L$	Urea	3.0 mmol/L
Neutrophils	$8.5 \times 10^9/L$	Creatinine	62 micromol/L
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ALT	21 iu/L		
Alkaline Phosphatase	40 iu/L		

Peripheral blood film:

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What is the most likely diagnosis?

	G6PD deficiency
	<i>Plasmodium falciparum</i> infection
	<i>Mycoplasma pneumoniae</i>
	Hereditary spherocytosis
	Lead poisoning

Dashboard

Overall score: 0%

1 -

Question 12 of 110

A 42-year-old man with no past medical history of note and on no medications presents with complaints of dark-red urine during the night or early morning. His urine becomes clear during the day. He is otherwise asymptomatic. Urine dipstick is positive for blood but microscopy comes back as not showing any red blood cells. Clinical examination is unremarkable. His blood profile shows a mild macrocytic anaemia with an elevated reticulocyte count and he has an International Normalised Ratio (INR) of 7. Which of the following should be included in your management of the suspected condition?

<input type="checkbox"/>	Warfarin
<input type="checkbox"/>	Tranexamic acid
<input type="checkbox"/>	Imatinib
<input type="checkbox"/>	Aspirin
<input type="checkbox"/>	Splenectomy

Dashboard

Overall score: 0%

1 -

□ Question 12 of 110

□ □

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	Imatinib
	Aspirin
	Splenectomy

Dashboard

Overall score: **0%****1** -

Question 13 of 110

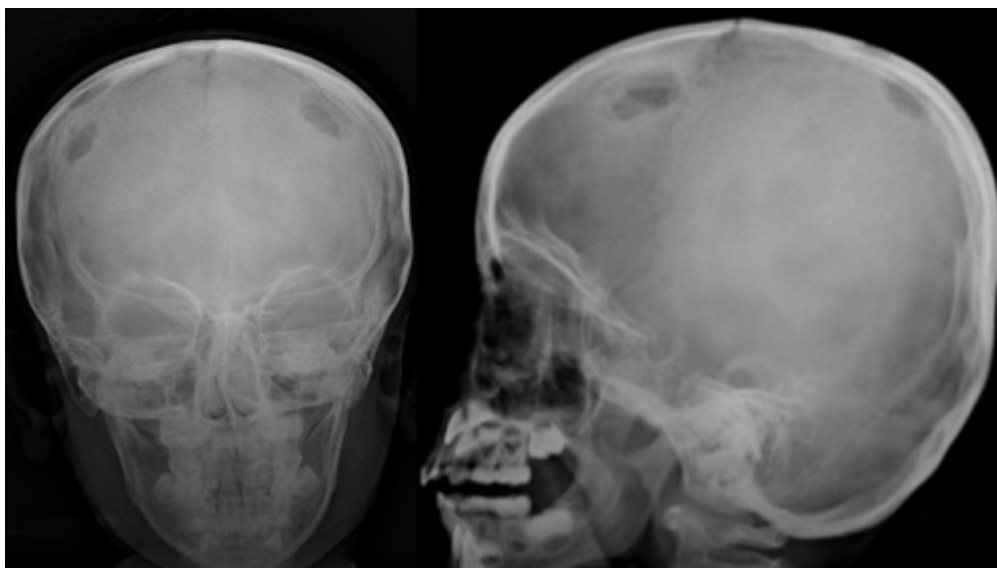


A 7-year-old girl who has recently emigrated from Turkey is brought to the Emergency Department with pain on walking and multiple swellings over her head. She also complains of persistent headaches which are now quite distracting and causing her to miss school. This symptoms have been getting gradually worse for the past few weeks.

She has a past medical history of eczema and asthma which is well controlled with a salbutamol inhaler as required. There is no family history of similar problems.

On examination a number of soft tissue swellings are noted on the scalp. She also has non-specific tenderness over the proximal part of the left femur.

A skull x-ray is requested:



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What is the most likely diagnosis?

Multiple myeloma

	Langerhans cell histiocytosis
	Neutrofibromatosis
	Systemic mastocytosis
	Wiskott-Aldrich syndrome

Dashboard

Overall score: 0%

1 -

Question 13 of 110

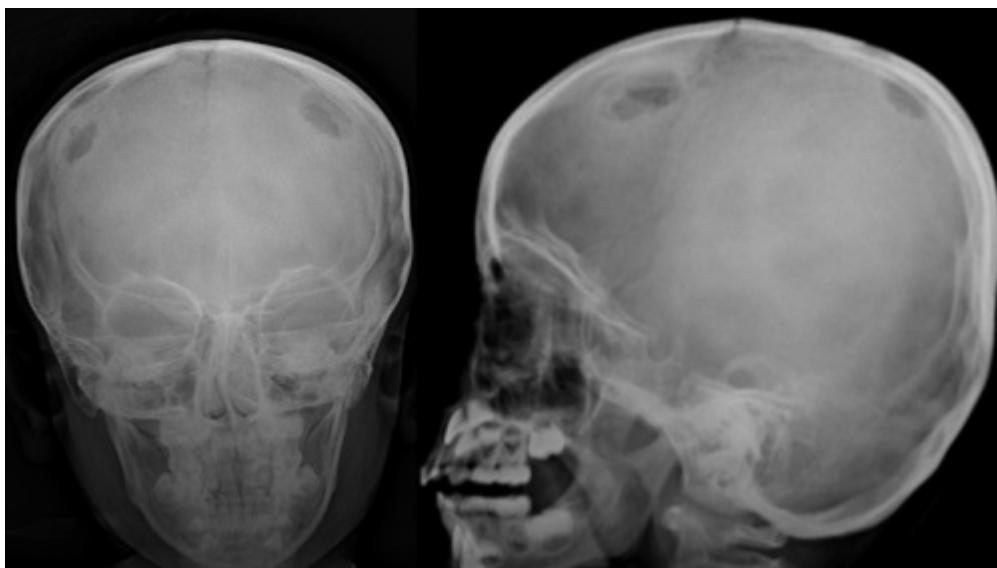


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Dashboard

Overall score: **0%**

1 -

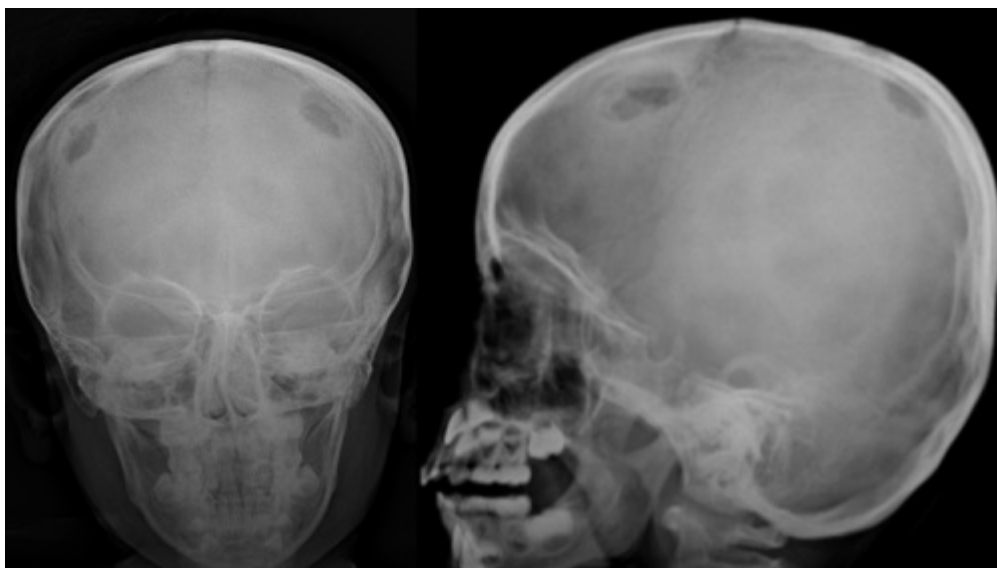
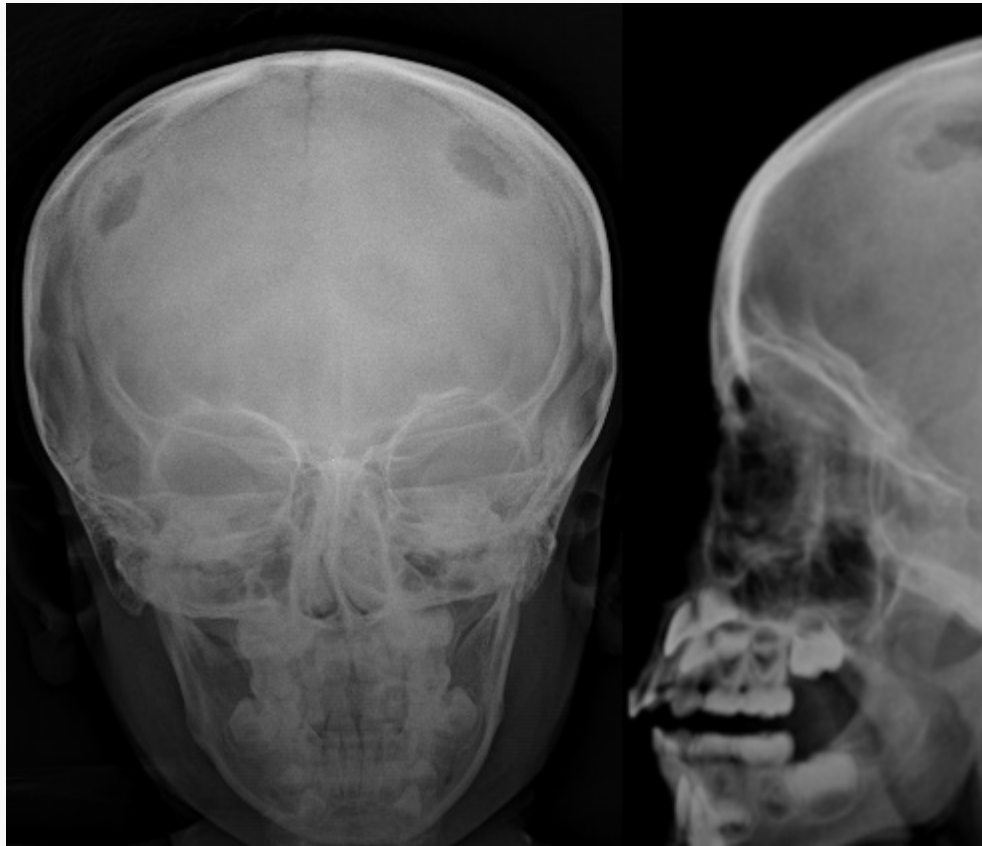
Question 13 of 110

A 7-year-old girl who has recently emigrated from a developing country and multiple swellings over her head. She is unable to walk, causing her to miss school. This symptoms

She has a past medical history of eczema and asthma. There is no family history of similar problems.

On examination a number of soft tissue swellings are noted over the proximal part of the left femur.

A skull x-ray is requested:



© Image used on license from Radiopaedia



What is the most likely diagnosis?

Multiple myeloma

	Langerhans cell histiocytosis
	Neutrofibromatosis
	Systemic mastocytosis
	Wiskott-Aldrich syndrome

Dashboard

Overall score: **0%**

1 -

□ Question 14 of 110



A 30-year-old man with acute myeloid leukaemia receives a bone marrow transplant from a matched unrelated donor.

7 days post-transplant, he develops a non-blanching purpuric rash over both legs. The rash is not itchy or scaly.

His heart rate 98/min and his blood pressure is 124/72 mmHg. His temperature is 37.3 °C and he is otherwise asymptomatic.

Blood tests are as follows:

Hb	89 g/l	Na ⁺	138 mmol/l
Platelets	9 * 10 ⁹ /l	K ⁺	3.2 mmol/l
WBC	0.8 * 10 ⁹ /l	Urea	4 mmol/l
Neuts	0.2 * 10 ⁹ /l	Creatinine	62 µmol/l
CRP	10 mg/l		

What is the most likely cause for the rash?

	Fungal infection
	Graft vs host disease
	Henoch Schonlein purpura
	Meningitis
	Thrombocytopenia

Overall score: **0%**

1 -

□ Question 14 of 110



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What is the most likely cause for the rash?

	Fungal infection
	Graft vs host disease
	Henoch Schonlein purpura
	Meningitis
	Thrombocytopenia

Overall score: **0%**

1 -

□ Question 15 of 110



A 44 year old male presents with a 2 month history of increasing lethargy. His wife reports him to be not quite himself for the past 2 months now, with poor oral intake and poor appetite. He is a self-employed software engineer but currently is unable to work due to his lethargy. He was previously treated for Hodgkin's lymphoma 5 years ago and has since been in remission.

On examination, he has no conjunctival pallor, is dry on his mucous membranes and extremely lethargic. Firm, rubbery lymph nodes are noted in the right axilla. Cardiovascular examination reveals a soft systolic murmur, respiratory and abdominal examinations are unremarkable. He is a non-smoker and drinks alcohol only occasionally. His blood tests are as follows:

Hb	8.8 g/dl
MCV	104 fl
Platelets	$94 \times 10^9/l$
WBC	$12.8 \times 10^9/l$
Red cell distribution	9% (normal 11.5-14.5%)
Blood film	leucoerythroblastic with myeloblasts

What is the cause of this patients anaemia?

	B12 and folate deficiency
	Iron deficiency
	Anaemia of chronic disease
	Myelodysplasia post-chemotherapy
	Marrow infiltration

Dashboard

Overall score: **0%**

1 -

□ Question 15 of 110



A 44 year old male presents with a 2 month history of increasing lethargy. His wife reports him to be not quite himself for the past 2 months now, with poor oral intake and poor appetite. He is a self-employed software engineer but currently is unable to work due to his lethargy. He was previously treated for Hodgkin's lymphoma 5 years ago and has since been in remission.

On examination, he has no conjunctival pallor, is dry on his mucous membranes and extremely lethargic. Firm, rubbery lymph nodes are noted in the right axilla. Cardiovascular examination reveals a soft systolic murmur, respiratory and abdominal examinations are unremarkable. He is a non-smoker and drinks alcohol only occasionally. His blood tests are as follows:

Hb	8.8 g/dl
MCV	104 fl
Platelets	$94 \times 10^9/l$
WBC	$12.8 \times 10^9/l$
Red cell distribution	9% (normal 11.5-14.5%)
Blood film	leucoerythroblastic with myeloblasts

What is the cause of this patients anaemia?

	B12 and folate deficiency
	Iron deficiency
	Anaemia of chronic disease
	Myelodysplasia post-chemotherapy
	Marrow infiltration

Dashboard

Overall score: **0%**

1 -

□ Question 16 of 110



A 60-year-old man is seen in the ambulatory care clinic with a two week history of reduced urine output. This has been associated with a general malaise and fatigue. He denies any fever, abdominal pain, dysuria or change in flow. He has a past history of multiple myeloma, hypertension and benign prostatic hypertrophy. He has been on lenalidomide and dexamethasone chemotherapy for the last four months and was told at a clinic appointment one month ago that there were no problems with his blood results. His other medications are ramipril, finasteride and tamsulosin, and these have not been altered in many years.

On examination he appears fatigued and pale. His abdomen is soft with no palpable masses.

His investigation results are as follows:

Urine dip:

Blood	-
Protein	++
Ketones	-
Leucocytes	+
Nitrites	-

Blood tests:

Hb	110 g/l
Platelets	$130 \times 10^9/l$
WBC	$9 \times 10^9/l$

Na ⁺	139 mmol/l
K ⁺	4.7 mmol/l

Urea	10 mmol/l
Creatinine	184 µmol/l
Ca ²⁺	2.3 mmol/l

Which investigation is most likely to reveal the cause of his renal failure?

	Blood film
	Mid-stream urine
	Serum free light chains
	Serum protein electrophoresis
	Ultrasound renal tract

Dashboard

Overall score: 0%

1 -

□ Question 16 of 110



A 60-year-old man is seen in the ambulatory care clinic with a two week history of reduced urine output. This has been associated with a general malaise and fatigue. He denies any fever, abdominal pain, dysuria or change in flow. He has a past history of multiple myeloma, hypertension and benign prostatic hypertrophy. He has been on lenalidomide and dexamethasone chemotherapy for the last four months and was told at a clinic appointment one month ago that there were no problems with his blood results. His other medications are ramipril, finasteride and tamsulosin, and these have not been altered in many years.

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	Blood film
	Mid-stream urine
	Serum free light chains
	Serum protein electrophoresis
	Ultrasound renal tract

Dashboard

Overall score: **0%**

1 -

□ Question 17 of 110



A 22-year-old man with sickle cell disease is seen in the Emergency Department. He has had worsening pain in his arms and legs for the last 2 days and 5 hours ago developed a painful sustained erection.

He has felt otherwise well recently and has no other past medical history. He is on regular paracetamol, ibuprofen, folate and penicillin. He does not receive regular transfusions and has been admitted with a crisis only once before. He has never had an episode of painful sustained erection.

On examination he has a heart rate of 110 beats per minute and a blood pressure of 132/95 mmHg. His oxygen saturations are 96% on room air and he is afebrile. His chest is clear and abdomen is soft. He has no swelling or erythema of his limbs, though they are generally tender. He continues to have an erection, though there is no sign of ischaemia.

His chest x-ray shows clear lung fields.

His blood tests are as follows:

Hb	78 g/l	Na ⁺	141 mmol/l
Platelets	331 * 10 ⁹ /l	K ⁺	3.7 mmol/l
WBC	9 * 10 ⁹ /l	Urea	5 mmol/l
Neuts	7 * 10 ⁹ /l	Creatinine	86 µmol/l
Lymphs	1.6 * 10 ⁹ /l	CRP	14 mg/l

He is treated with intravenous fluids and generous analgesia with diamorphine. His limb pain is improved but he continues to have a painful erection.

What is the next most appropriate step?

	Adrenalin
	Diethylstilbestrol

	Exchange transfusion
	Review by urologist
	Sildenafil

Dashboard

Overall score: **0%**

1 -

□ Question 17 of 110



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	Adrenalin
	Diethylstilbestrol

	Exchange transfusion
	Review by urologist
	Sildenafil

Dashboard

Overall score: **0%**
1 -

□ Question 18 of 110



A 52-year-old man presents with feeling generally unwell. For the past few weeks he has felt lethargic, lost weight and had troublesome testicular pain. Over the past week he has also noticed a 'weakness at the ankle' on the right side.

On examination blood pressure is 164/96 mmHg, pulse 86/min, temperature 37.3°C. Examination of the cardiovascular system is unremarkable. Foot drop is noted on the right side consistent with a common peroneal nerve palsy. A rash is also noted on his legs:



A urine dipstick shows blood++. What is the most likely diagnosis?

	Henoch-Schonlein purpura
	Wegener's granulomatosis
	Polyarteritis nodosa
	Amyloidosis
	Behcet's syndrome

Dashboard

Overall score: 0%

1 -

□ Question 18 of 110



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Dashboard

Overall score: 0%

1 -

□ Question 18 of 110



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	Polyarteritis nodosa
	Amyloidosis
	Behcet's syndrome

Dashboard

Overall score: **0%**

1 -







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Question 19 of 110

A 35-year-old woman suffer is seen as a medical emergency in the radiology department. She had contrast for a CT venogram and immediately became breathless, felt her throat closing up and developed a widespread rash. She was seen by the medical team and treated with adrenaline, hydrocortisone, chlorphenamine and fluid resuscitation. She needed adrenaline three times before her reaction was controlled. Three hours later on a medical review, she feels completely well and wants to go home. Her observations are normal and her rash has resolved. How long in total should she stay for observation?

	She can be discharged when symptoms have resolved
	After 3-6 hours
	After 6-12 hours
	After 24 hours
	After 48 hours

Dashboard

Overall score: 0%

1 -

□ Question 19 of 110

□ □

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	After 6-12 hours
	After 24 hours
	After 48 hours

Dashboard

Overall score: **0%****1** -

□ Question 20 of 110



A 44 year old female patient is admitted to the oncology ward to undergo chemotherapy for Diffuse Large B-Cell lymphoma stage IVb. She had originally presented to her GP with intermittent abdominal bloating and constipation and occasional shortness of breath. She also reported having to often get up in the middle of the night to change the bed clothes due to drenching sweats. Her GP had been concerned by these symptoms and had organised an immediate chest X-ray to be undertaken at the nearby hospital.

Chest X-ray

- large mediastinal mass with clear lung fields.

On receiving this report the GP arranged an urgent appointment with a local haematologist as he suspected that the patient was suffering from lymphoma. She was seen only 4 days later. Given the clinical history the team at the hospital arranged some urgent investigations.

Hb	9.5 g/dl
Platelets	$140 \times 10^9/l$
WBC	$36.5 \times 10^9/l$
Lactate Dehydrogenase	2540IU/l

CT-guided Lymph node biopsy

- cells are large, with prominent nucleoli and abundant cytoplasm and many mitoses expressing CD19 and CD20 markers

PET scan

- large extra-nodal disease bulks most notable in the ileo-caecal area and in the mediastinum. Overall bulky disease in keeping with the diagnosis of advanced stage lymphoma.

The patient is admitted to receive cycle one of R-CHOP chemotherapy under close monitoring.

What electrolyte abnormalities would suggest tumour lysis syndrome?

	High Potassium, high Calcium, low Phosphate
	Low Potassium, high Calcium, low Phosphate
	High Potassium, low Calcium, high Phosphate
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Dashboard

Overall score: **0%**
1 -

□ Question 20 of 110

□ □

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Dashboard

Overall score: **0%**
1 -

□ Question 21 of 110



A 65-year-old female, known to have metastatic breast carcinoma presents to the hospital with a 24-hour history of increasing pain, swelling and erythema of her right calf. She is otherwise relatively well. She was diagnosed with breast carcinoma four years previously and was initially treated with surgery, radiotherapy and chemotherapy. She was found to have disease recurrence with distant metastasis 12 months previously. She is known to have liver and bone metastases.

On examination, she appears pale and has some hair loss following recent chemotherapy. Apart from her swollen, erythematous, tender right calf and a fentanyl patch examination is unremarkable.

Bloods on admission show:

Hb	100 g/l
Platelets	$180 \times 10^9/l$
WBC	$7.2 \times 10^9/l$
D-Dimer	1276 $\mu\text{g/L}$ (normal $<500\mu\text{g/L}$)

Na^+	132 mmol/l
K^+	4.5 mmol/l
Urea	7.2 mmol/l
Creatinine	110 $\mu\text{mol/l}$

She is diagnosed with a right leg deep vein thrombosis. Given her current clinical condition, what is the best method of anticoagulation?

	Low molecular weight heparin (LMWH) and warfarin until warfarin therapeutic followed by warfarin therapy for six months then reassess.

	Low molecular weight heparin (LMWH) for three months then reassess.
	Warfarin therapy starting with a slow loading regime for six months then reassess.
	Low molecular weight heparin (LMWH) for six months then reassess.
	Referral for inferior vena cava filter insertion

Dashboard

Overall score: **0%**

1 -

Question 21 of 110



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	Low molecular weight heparin (LMWH) for six months then reassess.
	Referral for inferior vena cava filter insertion

Dashboard

Overall score: **0%**

1 -

□ Question 22 of 110



A 57 year old female presents to pre-assessment surgical clinic prior to an elective arthroscopy of her left knee that she injured while playing tennis. She is otherwise asymptomatic, has no other medical history and is a lifelong non-smoker. She drinks 10 units of alcohol per week. Recently, she has experienced hot flushes and irregular periods, which she puts down to undergoing the menopause. Examination of her cardiovascular, respiratory and abdominal systems are unremarkable.

Her blood results are as follows:

Hb	9.5 g/dl
MCV	59 fl
Platelets	$389 \times 10^9/l$
WBC	$4.5 \times 10^9/l$
Red cell distribution width	13% (normal range 11.5-14.5%)
Blood film	anisocytosis, hypochromia, target cells

Which investigation is most likely to reveal the diagnosis?

	Serum ferritin
	Total iron binding capacity
	Serum iron
	Haemoglobin electrophoresis
	Bone marrow biopsy

Overall score: **0%**

1 -

□ Question 22 of 110



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Blood film	anisocytosis, hypochromia, target cells

Which investigation is most likely to reveal the diagnosis?

	Serum ferritin
	Total iron binding capacity
	Serum iron
	Haemoglobin electrophoresis
	Bone marrow biopsy

Overall score: **0%**

1 -

□ Question 23 of 110



A 72-year-old lady is admitted with a tonic-clonic seizure. She was initially treated with two doses of 10mg diazepam however she failed to respond. She was then prescribed a loading dose of intravenous phenytoin and then prescribed maintenance dose phenytoin. Past medical history included a previous stroke, gallstones and hypertension. Drug history included clopidogrel, amlodipine, simvastatin. She recovered well and was discharged 6 days later.

Three weeks after her hospital admission she visits her GP accompanied by her husband complaining of feeling generally unwell and a rash. On examination she has a wide spread morbilliform eruption on most of her body and some mild right upper quadrant pain. The GP could palpate cervical and inguinal lymph nodes. Observations heart rate 110 regular, blood pressure 120/80, saturations 97% on air and temperature 38.2. The GP sends the patient to hospital for further tests. Bloods show:

Hb	110 g/l
WCC	$14 \times 10^9/l$
Neutrophils	$7.2 \times 10^9/l$
Eosinophils	$2.3 \times 10^9/l$
Platelets	$81 \times 10^9/l$
Na ⁺	141 mmol/l
K ⁺	4.3 mmol/l
Creatinine	101 μ mol/l
Urea	6.8 mmol/l
Bilirubin	22 μ mol/l
Alk phos	80 u/l
ALT	150 u/l
Albumin	32 g/l
INR	1.1

What is the most likely diagnosis?

	Lymphoma
	DRESS syndrome
	Cholecystitis
	EBV
	Meningococcal septicaemia

Dashboard

Overall score: 0%

1 -

□ Question 23 of 110



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	Lymphoma
	DRESS syndrome
	Cholecystitis
	EBV
	Meningococcal septicaemia

Dashboard

Overall score: **0%**
1 -

Question 24 of 110



A previously healthy 68-year-old male patient is referred by his GP to the general medical clinic. He has mixed symptoms of pain in multiple areas, including his upper arm, neck and legs. This has worsened over a period of months and seems not to have been helped with multiple analgesics, including paracetamol, codeine phosphate and ibuprofen. In this time the patient has also become increasingly short of breath.

A full work up is undertaken and the results are shown -

Hb	9.4 g/dl
Platelets	$174 \times 10^9/l$
WBC	$8.4 \times 10^9/l$

Na ⁺	136 mmol/l
K ⁺	4.7 mmol/l
Urea	8.4 mmol/l
Creatinine	125 μ mol/l
Corrected calcium	2.9mmol/l
Albumin	34g/L

Kappa light chains detected
Lambda light chains absent

IgG elevated
IgA normal
IgM normal

Urine Bence Jones proteins detected

Skeletal survey multiple osteolytic lesions seen throughout axial skeleton including on the right humerus, thoracic spine and both femurs.

Given the presumed diagnosis, what tests are most relevant for staging of the condition?

	Calcium, x-rays and creatinine
	Free light chain level
	Renal function
	B2-microglobulin and albumin
	Haemoglobin and albumin

Dashboard

Overall score: **0%**

1 -

Question 24 of 110



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Given the presumed diagnosis, what tests are most relevant for staging of the condition?

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	Renal function
	B2-microglobulin and albumin
	Haemaglobin and albumin

Dashboard

Overall score: **0%**

1 -

□ Question 25 of 110

□ □

A 23-year-old woman is investigated for abdominal pain and haematuria. She started developing abdominal pain around 2 months ago and it is generally worse after eating. She also reports arthralgia, weight loss of 3kg and general lethargy.

On examination blood pressure is 150/102 mmHg, pulse 84/min and temperature 37.6°C. Dipstick examination of her urine shows blood+++.

Bloods show the following:

Na ⁺	142 mmol/l
K ⁺	4.9 mmol/l
Urea	8.9 mmol/l
Creatinine	123 µmol/l
CRP	73 mg/l

An angiogram is performed:



© Image used on license from Radiopaedia

What is the most likely diagnosis?

	Renal cell cancer
	Polyarteritis nodosa

	Henoch-Schonlein purpura
	Antiphospholipid syndrome
	Granulomatosis with polyangiitis

Dashboard

Overall score: **0%**

1 -

□ Question 25 of 110

□ □

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Urea	8.9 mmol/l
Creatinine	123 µmol/l
CRP	73 mg/l

An angiogram is performed:



© Image used on license from Radiopaedia



What is the most likely diagnosis?

Renal cell cancer

Polyarteritis nodosa

	Henoch-Schonlein purpura
	Antiphospholipid syndrome
	Granulomatosis with polyangiitis

Dashboard

Overall score: **0%**
1 -

□ Question 26 of 110



You are the medical registrar on call. The surgical registrar contacts you for a patient he has just seen in clinic who requires an elective cholecystectomy. The patient is a 65-year-old woman who has atrial fibrillation for which she takes rivaroxaban. The patient is otherwise well. The bloods performed in clinic that day are as follows:

Hb	131 g/l
Platelets	352 * 10 ⁹ /l
WBC	5.5 * 10 ⁹ /l
INR	1.5

Na ⁺	137 mmol/l
K ⁺	3.6 mmol/l
Urea	3.2 mmol/l
Creatinine	67 µmol/l

The surgical registrar would like to know how long the patient should omit their anticoagulation before the procedure?

	1 day
	2 days
	3 days
	5 days
	7 days

Overall score: **0%**

1 -

□ Question 26 of 110



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WBC	$5.5 \times 10^9/l$
INR	1.5

Na ⁺	137 mmol/l
K ⁺	3.6 mmol/l
Urea	3.2 mmol/l
Creatinine	67 μ mol/l

The surgical registrar would like to know how long the patient should omit their anticoagulation before the procedure?

	1 day
	2 days
	3 days
	5 days
	7 days

Overall score: **0%**

1 -

Question 27 of 110



A 32 year old patient presents the acute medical unit with 6 hour history of worsening chest pain. Otherwise he mentions that he has been feeling generally more tired than normal recently, is more breathless than usual and has noticed some dark discolouration of his urine, especially in the mornings. He has a past medical history of deep vein thrombosis (DVT) in his left leg for which he had 6 months of warfarin therapy 2 years ago.

An immediate ECG is performed with shows anterior ST depression and T wave inversion.

CXR: nil acute

Blood tests:

Troponin I	1.02 µg/L (elevated)
Hb	102 g/l
Plt	101 x10 ⁹ /l
WCC	5.7 x10 ⁹ /l
Na+	136 mmol/l
K+	5.0 mmol/l
Urea	8 mmol/l
Creatinine	79 µmol/l

The patient is taken to the cath lab due to his cardiac sounding chest pain with ECG and cardiac enzyme abnormalities. The coronary angiogram shows a thrombosis of the left anterior descending artery, which is aspirated during the procedure. No significant atherosclerotic plaque formation or stenosis of the coronary arteries is identified.

Given this gentleman's presentation, which of the following investigations would be most useful to do next?

Anti cardiolipin antibodies

	Acid haemolysis test
	Antiphospholipid antibodies
	Factor V leiden levels
	Coombs' test

Dashboard

Overall score: **0%**

1 -

Question 27 of 110



A 32 year old patient presents the acute medical unit with 6 hour history of worsening chest pain. Otherwise he mentions that he has been feeling generally more tired than normal recently, is more breathless than usual and has noticed some dark discolouration of his urine, especially in the mornings. He has a past medical history of deep vein thrombosis (DVT) in his left leg for which he had 6 months of warfarin therapy 2 years ago.

An immediate ECG is performed with shows anterior ST depression and T wave inversion.

CXR: nil acute

Blood tests:

Troponin I	1.02 µg/L (elevated)
Hb	102 g/l
Plt	101 x10 ⁹ /l
WCC	5.7 x10 ⁹ /l
Na+	136 mmol/l
K+	5.0 mmol/l
Urea	8 mmol/l
Creatinine	79 µmol/l

The patient is taken to the cath lab due to his cardiac sounding chest pain with ECG and cardiac enzyme abnormalities. The coronary angiogram shows a thrombosis of the left anterior descending artery, which is aspirated during the procedure. No significant atherosclerotic plaque formation or stenosis of the coronary arteries is identified.

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	Acid haemolysis test
	Antiphospholipid antibodies
	Factor V leiden levels
	Coombs' test

Dashboard

Overall score: **0%**
1 -

□ Question 28 of 110



A 40 year old man presents to the Emergency Department with non-specific symptoms of lethargy, malaise, headache, body aches, a low grade fever and a sore throat. Examination is essentially normal aside from multiple limb petechiae. Tympanic temperature is 37.6°C. Blood pressure, heart rate and pulse oximetry is normal.

Blood tests show:

Haemoglobin	112g/L	Sodium	136mmol/L
MCV	82fL	Potassium	4.5mmol/L
Platelets	$77 \times 10^9/L$	Urea	6.9mmol/L
White cells	$32 \times 10^9/L$	Creatinine	111mol/L
Prothrombin time	23secs	CRP	54mg/L
Fibrinogen	0.45g/L	HIV test	Negative
Liver enzymes	normal		

Automated counter is unable to supply differential white cell count.

Manual blood film shows immature granulocytes with bilobed nuclei and Auer rods.

What is the most important immediate therapy to institute?

	All trans retinoic acid (ATRA) [tretinoin]
	Methotrexate
	Imatinib
	Rituximab
	Arsenic trioxide

Dashboard

Overall score: **0%**

1 -

□ Question 28 of 110



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Dashboard

Overall score: **0%**

1 -

□ Question 29 of 110



A 67 year old female presents with 4 month history of increasing lethargy and malaise. She has no past medical history and travels widely, last visiting the Middle East one week prior to this admission, returning with a respiratory tract infection that appears to be resolving. She is a lifelong non-smoker and does not drink alcohol to excess. Over the past two weeks, she reports increasing bilateral persistent headache associated with binocular visual blurring. In addition, she describes a non-specific abdominal discomfort without any changes in bowel habit.

On examination, you note bilateral axillary lymphadenopathy and conjunctival pallor. Cardiovascular and respiratory system examinations were unremarkable. Neurological examination is unremarkable. Fundoscopy reveals dilated tortuous retinal veins. Abdominal examination reveals hepatosplenomegaly. Lastly, you note areas of purpura around her left anterior shin and her right upper arm. A chest radiograph is unremarkable.

Her blood results are as follows:

Hb	8.7 g/dl
MCV	79 fl
Platelets	$190 \times 10^9/l$
WBC	$3.4 \times 10^9/l$
Na ⁺	142 mmol/l
K ⁺	4.5 mmol/l
Urea	7.6 mmol/l
Creatinine	89 μ mol/l
Adj Calcium	2.47 mmol/l
Phosphate	1.34 mmol/l
LDH	1890 (normal range 140-280 units/L)
Serum electrophoresis	IgM paraprotein band at 5.4 g/L

A bone marrow biopsy demonstrates 14% infiltration of lymphoplasmacytic cells

What is the diagnosis?

	Waldenstrom's macroglobulinaemia
	Multiple myeloma
	Monoclonal gammopathy of unknown significance (MGUS)
	Chronic lymphocytic leukemia (CLL)
	Upper respiratory tract infection (URTI)

Dashboard

Overall score: 0%

1 -

□ Question 29 of 110



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Dashboard

Overall score: **0%**
1 -

□ Question 30 of 110



A 75-year-old male presents following a fall whilst intoxicated. He has sustained a fractured right neck of femur and is admitted under the orthopaedic team. He has a past medical history of liver cirrhosis, ischaemic heart disease and congestive cardiac failure. There is a suspicion that he drinks excessively.

On examination, his right leg is externally rotated and shortened. He is thin and has mild pitting oedema to his mid-shins. His pulse is 92 beats per minute and regular, respiratory rate 18 breaths per minute, blood pressure 121/72 mmHg, SaO₂ 94% on room air. Apart from a slight expiratory wheeze, his chest is clear to auscultation.

Bloods show:

Hb	112 g/l
Platelets	48 * 10 ⁹ /l
WBC	11.2 * 10 ⁹ /l
INR	1.9

The orthopaedic team arrange for a transfusion of two units of fresh frozen plasma (FFP) and two units of platelets before taking the patient to theatre.

Four hours after the transfusion the patient has become unwell.

Observations show a respiratory rate of 34 breaths per minute, S_aO₂ 80% on room air. Heart rate is 120 beats per minute and regular. Temperature is 38.5°C. A chest X-ray is performed at the bedside which shows bilateral shadowing.

What is the most likely cause of the patient's deterioration?

	Community acquired pneumonia
	Transfusion associated circulatory overload
	Acute myocardial infarction
	Transfusion associated acute lung injury

	Atrial fibrillation with a rapid ventricular response

Dashboard

Overall score: **0%**

1 -

Question 30 of 110



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<input checked="" type="radio"/>	Transfusion associated acute lung injury

	Atrial fibrillation with a rapid ventricular response

Dashboard

Overall score: **0%**
1 -

Question 31 of 110



A 24 year-old medical student of Italian extraction returns from elective in India. One week after his return he presents with fever, headache, and myalgia.

Investigations are as follows:

Hb	10.1 g/dl
MCV	101.2 fl
Platelets	$43 \times 10^9/l$
WCC	$6.1 \times 10^9/l$
Na	134mmol/l
K	4.6 mmol/l
Urea	3.8 mmol/l
Creatinine	80 mol/l
ALT	44 IU/l
ALP	78 IU/l
Bilirubin	33 mol/l
Albumin	38 g/l
Thick and thin blood films	Plasmodium ovale parasites with red cells

What other blood test will be essential for the management of this condition?

	Coomb's test
	G6PD enzyme assay

	Chloroquine resistance test
	Ham's test
	Reticuloctye count

Dashboard

Overall score: **0%**
1 -

Question 31 of 110



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Investigations are as follows:

Hb	10.1 g/dl
MCV	101.2 fl
Platelets	43 x10 ⁹ /l
WCC	6.1 x10 ⁹ /l
Na	134mmol/l
K	4.6 mmol/l
Urea	3.8 mmol/l
Creatinine	80 mol/l
ALT	44 IU/l
ALP	78 IU/l
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Dashboard

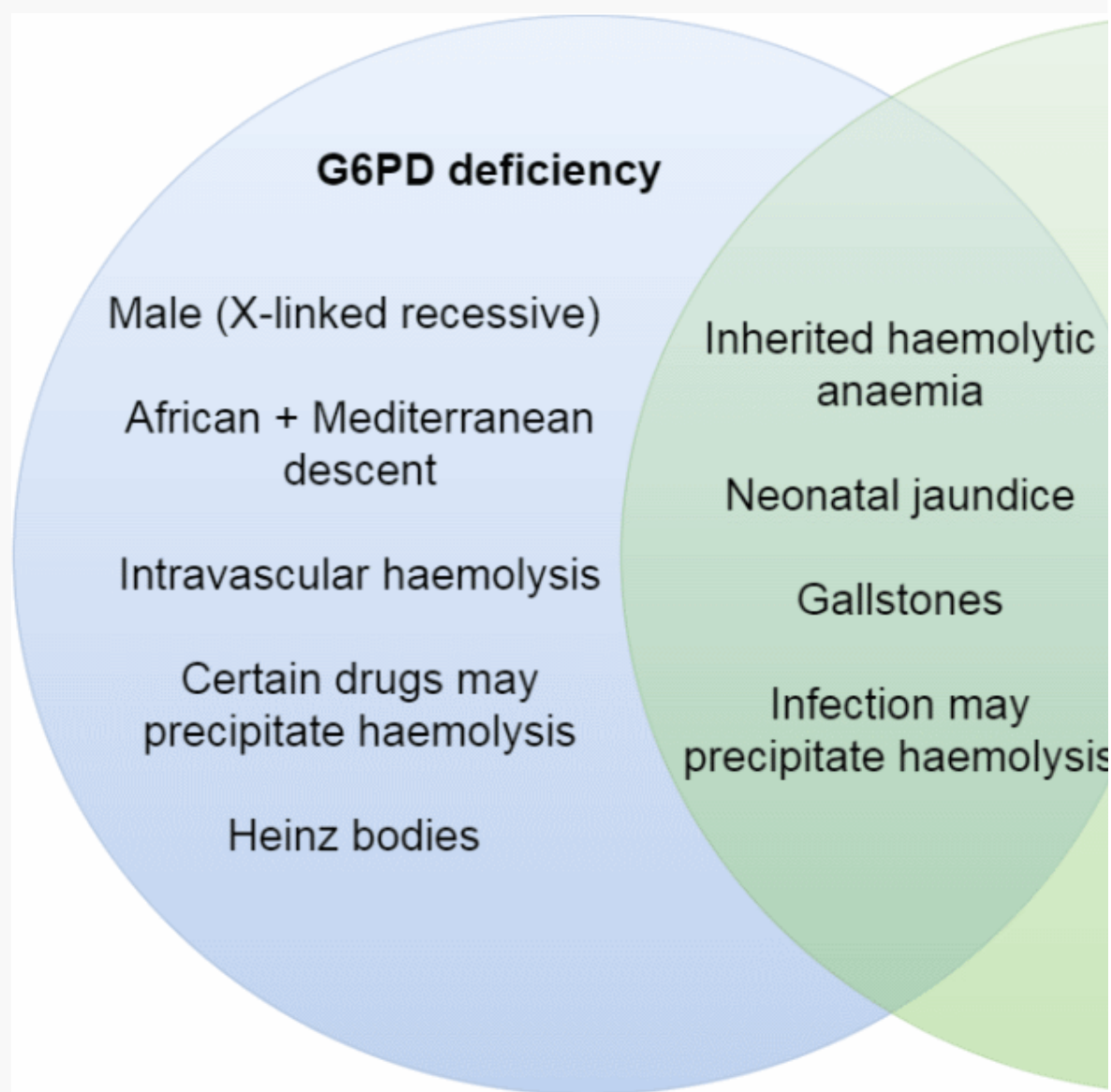
Overall score: **0%**
1 -

Question 31 of 110

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Thick and thin blood films	Plasmodium ovale parasites with red cells



What other blood test will be essential for the management of this condition?

	Coomb's test
	G6PD enzyme assay

	Chloroquine resistance test
	Ham's test
	Reticuloctye count

Dashboard

Overall score: **0%**
1 -

□ Question 32 of 110



A 64 year old female undergoing chemotherapy treatment with mitomycin for bladder cancer presents to the Emergency Department with confusion, epistaxis and a widespread rash. On examination she is febrile and has a diffuse petechial rash.

Hb	10.6g/dl
Platelets	54 * 10 ⁹ /l
WBC	11.2 * 10 ⁹ /l
Urea	11mmol/l
Creatinine	117μmol/l
Bilirubin	58μmol/l
ALP	42u/l

A blood film shows fragmented erythrocytes.

What is the most appropriate treatment for this patient?

	Renal dialysis
	Supportive treatment
	A pool of platelets and fluid resuscitation
	Urgent plasma exchange
	IV tazocin, a pool of platelets and fluid resuscitation

Overall score: **0%**

1 -

□ Question 32 of 110

□ □

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Overall score: **0%**

1 -

Question 33 of 110

□ □

A 45-year-old woman is reviewed shortly after being diagnosed with having a pulmonary embolism. Around two weeks ago she was admitted with a severe community-acquired pneumonia which resulted in her being ventilated and admitted to ITU. She responded well to intravenous antibiotics but shortly before discharge became more short-of-breath again. A CTPA was requested which showed a pulmonary embolism. She is started immediately on dalteparin. What is the most appropriate next step?

	Switch to warfarin for 6 weeks
	Switch to warfarin for 3 months
	Switch to warfarin for 6 months
	Keep on dalteparin for 6 weeks
	Keep on dalteparin for 3 months

Dashboard

Overall score: 0%

1 -

□ Question 33 of 110

□ □

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	Switch to warfarin for 6 months
	Keep on dalteparin for 6 weeks
	Keep on dalteparin for 3 months

Dashboard

Overall score: **0%****1** -

Question 34 of 110



A 34 year old male presents with a 4 day history of bloody diarrhoea and vomiting, fevers and associated with occasional abdominal cramps. He reports no other symptoms. He reports no previous history of gastrointestinal disease; there is no family history of inflammatory bowel disease. He has no past medical history except for a left knee arthroscopy following an injury playing football 7 months ago. He is a lifelong non-smoker, drinks 14 units of alcohol a month, has not travelled abroad in the past year and last ate outside of his home a week ago during a barbecue at his brothers house.

On examination, he appears dehydrated. There is mild generalised abdominal tenderness with increased bowel sounds. Respiratory and cardiovascular examinations were unremarkable. His blood tests are as follows:

Hb	9.2 g/dl
MCV	90fl
Platelets	$49 \times 10^9/l$
WBC	$14.2 \times 10^9/l$
Neutrophils	$12.8 \times 10^9/l$
Blood film	schistocytes, reticulocytosis
Direct antiglobulin test	negative
Urea	14.9 mmol/l
Creatinine	159 $\mu\text{mol/l}$
CRP	82 mg/l

What is the cause of this patients blood abnormalities?

<input type="checkbox"/>	Microangiopathic haemolytic anaemia
<input type="checkbox"/>	Cold autoimmune haemolytic anaemia
<input type="checkbox"/>	

	Warm autoimmune haemolytic anaemia
	Iron deficiency anaemia
	Acute myeloid leukemia

Dashboard

Overall score: **0%**

1 -

Question 34 of 110



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Hb	9.2 g/dl
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	Cold autoimmune haemolytic anaemia

	Warm autoimmune haemolytic anaemia
	Iron deficiency anaemia
	Acute myeloid leukemia

Dashboard

Overall score: **0%**
1 -

Question 35 of 110

□ □

A 26 year old female who is 14 days post-partum (spontaneous vaginal delivery) presents to your medical admissions unit with her partner who is worried that she is confused. She is unable to provide any history but her partner tells you that she has gradually gotten worse over the past few days. Her observations are as follows: temperature 38°C, pulse 90/min, blood pressure 154/88 mmHg, respiratory rate 16/min, sats 99% on room air.

On examination, she looks pale. Her chest is clear and abdomen is soft, non-tender. She has multiple bruises on her arms. Her blood results are pending.

What is the most likely diagnosis?

	Haemolytic uraemic syndrome
	Thrombotic thrombocytopenic purpura
	Idiopathic thrombocytopenic purpura
	Retained products of placenta
	Disseminated intravascular coagulation (DIC)

Dashboard

Overall score: 0%

1 -

□ Question 35 of 110

□ □

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	Retained products of placenta
	Disseminated intravascular coagulation (DIC)

Dashboard

Overall score: **0%**

1 -

□ Question 36 of 110

□ □

An 85 year old male is referred by the anaesthetic registrar after abnormal blood test results were noted during pre-assessment for an elective hip replacement. He is other wise fit and well, independent with all activities of daily living and continues to drive. His past medical history includes diet controlled type 2 diabetes mellitus and hypertension. On examination, he is alert and well, reports no discomfort, pain, or non-specific malaise. No skin bruises or conjunctival pallor are noted. You note a rubbery, non-tender and firm 3cm lymph node in the left cervical chain and non-tender splenomegaly at 8cm below the costal margin. His chest is clear and normal heart sounds are noted. His blood tests are as follows, with blood tests from his GP 6 months ago in brackets:

Hb	8.9 (9.5) g/dl
Platelets	78 (76) * $10^9/l$
WBC	67 (32) * $10^9/l$
Blood film	mature lymphocytes and smudge cells

What is the appropriate treatment?

	Monitor and repeat blood count in 6 months
	Fludarabine, cyclophosphamide and rituximab treatment immediately
	Delayed chlorambucil treatment in 6 months
	Platelet transfusion
	Intravenous immunoglobulin

Dashboard

Overall score: 0%

□ Question 36 of 110

□ □

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Dashboard

Overall score: **0%**

Question 37 of 110



A 72 year old male was admitted with 72 hours of progressive ascending motor weakness associated with palpitation and back pain. A diagnosis of Guillain-Barre syndrome was made and he was started on intravenous immunoglobulin (IVIg) with intensive monitoring on the neurology ward. You are asked to review the bloods of the patient on the fourth of five days of IVIg treatment. You note his sodium to have changes as follows: Na 145 → 141 → 134 → 130 → 126. The patient reports 'feeling better after the drip', denies any cough, shortness of breath, diarrhoea, nausea or vomiting. On examination, he appears comfortable in bed, JVP 2/3 cm above the angle of Louis, has warm peripheries and capillary refill time of 2 seconds. His chest is clear on auscultation, cardiovascular examination unremarkable and neurological examination unchanged from admission. What is your management plan?

	No action
	Intravenous fluid
	Fluid restrict to 1.5 litres
	Contact endocrinology team regarding possible syndrome of inappropriate anti-diuretic hormone (SIADH)
	Contact intensive care unit regarding escalation and intubation

Dashboard

Overall score: 0%
1 -

Question 37 of 110



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Dashboard

Overall score: 0%
1 -

□ Question 38 of 110



A 75-year-old man underwent a right hemicolectomy as radical treatment for a caecal adenocarcinoma. During the immediate post-operative period the patient was noted to be significantly confused and investigations to assess for a septic source were requested. Blood tests indicated new neutrophilia and thrombocytopenia. Noting that the patient had been started on enoxaparin for venous thrombosis prophylaxis on the first day after the operation, heparin induced thrombocytopenia antibodies were requested by the surgical junior team.

A specialist medical review was requested on day 6 post-operatively to assess the patient in the light of the results of these investigations. The patient was found to be back to his cognitive baseline and was starting to mobilise on the ward with the help of physiotherapy. Clinical examination was unremarkable except for the healing abdominal surgical incision.

Aside from his recent cancer diagnosis, the patient's past-medical history included only hypercholesterolaemia treated with simvastatin. He had no known allergies or drug sensitivities.

Blood result	Pre-operatively	Day 1 post-op	Day 4 post-op	Day 6 post-op
Platelets ($\times 10^3$ / microlitre)	175	95	125	141
Neutrophils ($\times 10^3$ / microlitre)	5.3	14.8	12.8	8.8
C-reactive protein (mg / L)	6	142	94	25
International normalised ratio	1.0	1.2	1.1	1.1

Chest x-ray: clear lung fields aside from minor bibasal atelectasis

Urine culture: no growth

CT abdomen: minimal abdominal free fluid, no evidence of focal collection, large bowel anastomoses intact

Heparin-induced thrombocytopenia antibodies: positive (moderate titre)

What is the likely cause for the patient's thrombocytopenia?

--	--

	Heparin induced thrombocytopenia
	Post-operative sepsis
	Post-operative thrombocytopenia
	Thrombotic thrombocytopenic purpura
	Disseminated intravascular coagulation

Dashboard

Overall score: 0%

1 -

□ Question 38 of 110



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Dashboard

Overall score: **0%**
1 -

Question 39 of 110

□ □

A 62-year-old gentleman is seen at the respiratory clinic after a mass lesion is identified by his GP on chest x-ray. He is a heavy smoker and has had a cough and weight loss for the past two months. On further questioning, he admits to feeling very weak and is having difficulty getting out of a chair. On examination, the consultant notices some proximal muscle wasting. Initial investigations reveal a blood pressure of 170/90mmHg and a low potassium. In addition to organising staging CT and bronchoscopy, he requests a 24-hour urinary cortisol test, which is raised.

Which of the following is the most likely underlying pathology?

	Squamous cell bronchial carcinoma
	Large cell bronchial carcinoma
	Carcinoid tumour
	Small cell bronchial carcinoma
	Bronchial adenocarcinoma

Dashboard

Overall score: 0%

1 -

Question 39 of 110

□ □

A 62-year-old gentleman is seen at the respiratory clinic after a mass lesion is identified by his GP on chest x-ray. He is a heavy smoker and has had a cough and weight loss for the past two months. On further questioning, he admits to feeling very weak and is having difficulty getting out of a chair. On examination, the consultant notices some proximal muscle wasting. Initial investigations reveal a blood pressure of 170/90mmHg and a low potassium. In addition to organising staging CT and bronchoscopy, he requests a 24-hour urinary cortisol test, which is raised.

Which of the following is the most likely underlying pathology?

	Squamous cell bronchial carcinoma
	Large cell bronchial carcinoma
	Carcinoid tumour
	Small cell bronchial carcinoma
	Bronchial adenocarcinoma

Dashboard

Overall score: **0%**

1 -

□ Question 39 of 110

□ □

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Which of the following is the most likely underlying pathology?

	Squamous cell bronchial carcinoma
	Large cell bronchial carcinoma
	Carcinoid tumour
	Small cell bronchial carcinoma
	Bronchial adenocarcinoma

Dashboard

Overall score: **0%****1** -



Question 40 of 110

□ □

A 68-year-old gentleman with known chronic lymphocytic leukaemia (CLL) is reviewed in the Haematology Clinic.

He is normally an active gentleman who enjoys playing golf 3 times per week, but he complains that he has been feeling increasingly fatigued since his last appointment 6 months previously. He states that he has not been able to play golf for several weeks and his wife tells you that he has started napping during the afternoons. His past medical history is otherwise unremarkable and he takes no regular medications.

Examination reveals a tired gentleman with marked axillary and inguinal lymphadenopathy. His abdomen is soft with mild upper abdominal tenderness. A liver edge is palpable 3cm below the costal margin and his spleen is markedly enlarged.

His full blood count today is as follows:

Hb	114 g/l
Platelets	$173 \times 10^9/l$
WBC	$30.4 \times 10^9/l$
Neutrophils	$5.8 \times 10^9/l$
Lymphocytes	$23.1 \times 10^9/l$

His lymphocyte count 2 months ago was $15.3 \times 10^9/l$ and a decision to start the patient on fludarabine, cyclophosphamide, and rituximab (FCR) chemotherapy is taken.

Given the proposed treatment strategy, which of the following prophylactic medications is it most important to start?

	Co-trimoxazole
	Aciclovir
	Entecavir
	Fluconazole

	Penicillin V
--	--------------

Dashboard

Overall score: **0%**
1 -

Question 40 of 110

□ □

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He is normally an active gentleman who enjoys playing golf 3 times per week, but he complains that he has been feeling increasingly fatigued since his last appointment 6 months previously. He states that he has not been able to play golf for several weeks and his wife tells you that he has started napping during the afternoons. His past medical history is otherwise unremarkable and he takes no regular medications.

Examination reveals a tired gentleman with marked axillary and inguinal lymphadenopathy. His abdomen is soft with mild upper abdominal tenderness. A liver edge is palpable 3cm below the costal margin and his spleen is markedly enlarged.

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	Entecavir
	Fluconazole

	Penicillin V
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Dashboard

Overall score: **0%**
1 -

Question 41 of 110



A 33-year-old patient presents to the emergency department feeling very lethargic and tired over the last week. He has been increasingly short of breath on exertion and his exercise tolerance has fallen to a few hundred yards before he is out of breath. He is a known sickle cell disease patient who is managed by the Haematology team in your hospital. On examination he is afebrile and heart rate and blood pressure are within normal limits. His respiratory rate is 16/min and his oxygen saturation is 98% on air. He does become noticeably short of breath on minimal movement.

His blood tests show:

Hb	65 g/l
Platelets	$46 \times 10^9/l$
WBC	$2.5 \times 10^9/l$
Neuts	$1.2 \times 10^9/l$
Haptoglobins	1.9 g/L (0.3-2.0)
Reticulocytes	$8.9 \times 10^9/L$ (25-80)

Na ⁺	136 mmol/l
K ⁺	3.9 mmol/l
Urea	7.4 mmol/l
Creatinine	78 μ mol/l
CRP	<3 mg/L(<10)
LDH	200 IU/L (200-500)

Bilirubin	4 μ mol/l
ALP	89 u/l
ALT	34 u/l

Albumin	39 g/l

His chest x-ray is normal.

On further questioning, he tells you that his 5-year-old daughter was unwell 3 weeks ago. He took her to see the GP and was told it was likely to be a viral illness. What is the most likely cause for his blood results as shown?

	Parvovirus B19
	Acute chest crisis
	Splenic sequestration
	HIV
	Legionella pneumoniae

Dashboard

Overall score: 0%

1 -

Question 41 of 110



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On further questioning, he tells you that his 5-year-old daughter was unwell 3 weeks ago. He took her to see the GP and was told it was likely to be a viral illness. What is the most likely cause for his blood results as shown?

	Parvovirus B19
	Acute chest crisis
	Splenic sequestration
	HIV
	Legionella pneumoniae

Dashboard

Overall score: **0%**

1 -

□ Question 42 of 110

□ □

A 25 year old man is admitted to the acute medical unit and is treated for a left lobar pneumonia. Looking through his past medical history you note he has had 3 previous admissions with similar presentations in the last 5 years. He has no other past medical history of note, apart from what he describes as 'a few' episodes of sinusitis. His blood differential, after treatment of his pneumonia, is normal. His HIV test is also negative. What is the possible underlying diagnosis?

	Cystic fibrosis
	Selective IgA deficiency
	Wiskott-Aldrich syndrome
	Acute lymphoblastic leukemia
	Digeorges syndrome

Dashboard

Overall score: 0%

1 -

□ Question 42 of 110

□ □

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	Cystic fibrosis
	Selective IgA deficiency
	Wiskott-Aldrich syndrome
	Acute lymphoblastic leukemia
	Digeorges syndrome

Dashboard

Overall score: **0%****1** -

□ Question 43 of 110



A 16-year-old female was admitted with new onset facial swelling. The facial swelling started 45 minutes ago and initially involved her lips. She complained of a sensation of choking and a feeling of being unable to speak with hoarseness of her voice. She had been investigated on multiple occasions for abdominal pain and was diagnosed with non-specific abdominal pain. She was not taking any medication and was otherwise healthy prior to the admission.

She was given prednisolone 40mg PO and chlorpheniramine 10mg PO and admitted for observation. Whilst in the department she developed profound shortness of breath with associated stridor. Her swelling around her lips worsened and involved the whole of her face. On examination, she was in respiratory distress with severe biphasic stridor. Her respiratory rate was 32/min with an oxygen saturation of 88% on air. Auscultation of her chest also revealed the presence of a widespread polyphonic wheeze. Examination of her cardiovascular system revealed the presence of flushed peripheries with a bounding peripheral pulse. Her pulse was 102bpm and her blood pressure was 92/68 mmHg. Her GCS was 15 and neurological and abdominal examinations were unremarkable. She was cannulated and commenced on stat intravenous colloid solution. She was given adrenaline 0.5mg IM on three separate occasions within 10 minutes with no improvement. She was transferred immediately to the Intensive Care Unit and an anaesthetist fast bleeped to secure her airway.

What is the best immediate management step pending definitive airway management?

	Commence IV adrenaline infusion
	Commence danazol
	Commence IV dopamine
	Commence fresh frozen plasma infusion
	Commence C1 esterase inhibitor concentrate infusion

Dashboard

Overall score: 0%

□ Question 43 of 110



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	Commence fresh frozen plasma infusion
	Commence C1 esterase inhibitor concentrate infusion

Dashboard

Overall score: **0%**

Question 44 of 110

□ □

A 67-year-old woman presents to her GP with progressive numbness and difficulty walking. Furthermore her daughter who was present mentions that she has been behaving strange over the past few months.

She is otherwise fit and well, apart from a ileal resection for treatment-resistant Crohn's disease 9 years ago.

Laboratory tests showed a low haematocrit and mean corpuscular volume of 110 fL. Blood smear analysis noted macrocytic red blood cells with hypersegmented neutrophils.

Which of the following is the most likely cause of the patient's presentation?

	Ferrochelatase deficiency
	Folate deficiency
	Intrinsic factor deficiency
	Iron deficiency anaemia
	Cobalamin deficiency

Dashboard

Overall score: 0%

1 -

Question 44 of 110

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Which of the following is the most likely cause of the patient's presentation?

<input type="checkbox"/>	Ferrochelatase deficiency
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<input type="checkbox"/>	Intrinsic factor deficiency
<input type="checkbox"/>	Iron deficiency anaemia
<input checked="" type="checkbox"/>	Cobalamin deficiency

Dashboard

Overall score: **0%**

1 -

Question 45 of 110



A 57 year old presents with recurrent episodes of bleeding gums, nosebleeds and intermittent haematuria over the past 6 weeks. He works as an accountant, does not have any past medical history but is an active smoker of 20 pack years. He drinks occasional alcohol.

On examination, scabs and dried blood is noted on mucous membranes. No arthritis or cutaneous abnormalities are noted. The nasal bridge is unremarkable. His conjunctiva appeared pale, respiratory, abdominal and cardiovascular examination was unremarkable. His blood tests are as follows:

Hb	3.7 g/dl
MCV	87 fl
Platelets	$17 \times 10^9/l$
WBC	$44.0 \times 10^9/l$
Blood film	myeloblasts with elongated, needle-like cytoplasmic inclusions

Na ⁺	147 mmol/l
K ⁺	3.2 mmol/l
Urea	7.8 mmol/l
Creatinine	70 μ mol/l

What is the underlying diagnosis?

	Acute myeloid leukaemia
	Acute lymphocytic leukaemia
	Chronic myeloid leukaemia

	Chronic lymphoid leukaemia
	Myelofibrosis

Dashboard

Overall score: **0%**
1 -

Question 45 of 110



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What is the underlying diagnosis?

	Acute myeloid leukaemia
	Acute lymphocytic leukaemia
	Chronic myeloid leukaemia

	Chronic lymphoid leukaemia
	Myelofibrosis

Dashboard

Overall score: **0%**
1 -

Question 46 of 110

□ □

A 24 year-old gentleman is referred for your opinion from the Emergency Department. He presented with his first tonic-clonic seizure. A CT scan of his head shows a contrast enhancing lesion in the left frontal lobe. On taking a history you elicit that he has been having recurrent nosebleeds and dark stools for the past 12 months.

What is the likely unifying diagnosis?

	Peutz Jeghers syndrome
	Hereditary haemorrhagic telangiectasia
	Tuberous sclerosis
	Von Willebrand disease
	Neurofibromatosis - type 2

Dashboard

Overall score: 0%

1 -

Question 46 of 110



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Dashboard

Overall score: **0%**

1 -

Question 46 of 110

□ □

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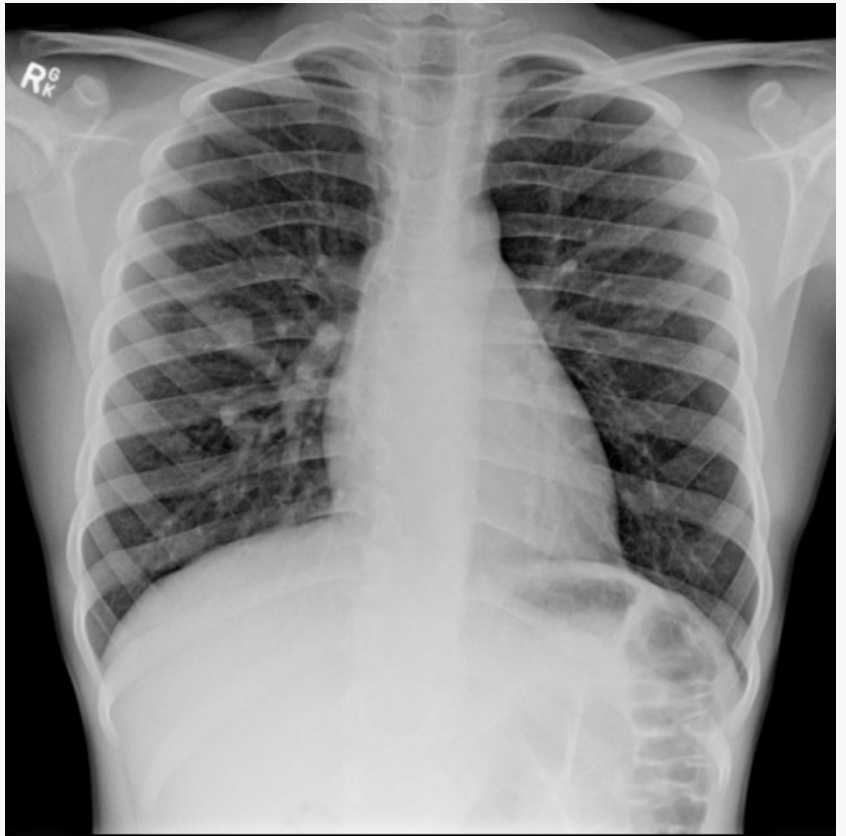
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	Tuberous sclerosis
	Von Willebrand disease
	Neurofibromatosis - type 2

Dashboard

Overall score: 0%

1 -



□ Question 47 of 110



A 33 year old female presents to urgent care centre complaining of 4 days of increasing lethargy and reduced exercise tolerance. In addition, she reports dark urine but no other symptoms. She normally works as a clerical member of staff in the same hospital. Her only past medical history is ulcerative colitis, which before a flare 2 weeks ago requiring addition of sulphasalazine, had been well controlled with no immunosuppressants. On examination, you note conjunctival pallor bilaterally. Her abdomen is soft and non-tender. Her respiratory, cardiovascular and neurological examinations are unremarkable except for a mild systolic murmur and sinus tachycardia of 104 beats/ minute. Rectal examination was empty, no oral ulcers were noted.

Her blood tests are as follows:

Hb	8.9 g/dl
MCV	85fl
Platelets	$356 \times 10^9/l$
WBC	$12.1 \times 10^9/l$
Blood film	Heinz bodies, reticulocytosis
CRP	30 mg/l
LDH	2400 u/l

What is the most appropriate immediate treatment?

	Transfuse 2 units of packed red blood cells
	Start intravenous hydrocortisone, stop sulphasalazine
	Start intravenous hydrocortisone, continue sulphasalazine
	Stop sulphasalazine only
	Urgent colonoscopy

Dashboard

Overall score: **0%**

1 -

□ Question 47 of 110



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	Stop sulphasalazine only
	Urgent colonoscopy

Dashboard

Overall score: **0%**

1 -

□ Question 48 of 110



A 70-year-old man is referred to the haematology clinic by his general practitioner with anaemia. He has experienced progressive fatigue and shortness of breath for four months. On further questioning he also describes waking up at night soaked in sweat on one or two nights per week for the last month. His weight is stable. He has a past medical history of hypertension and COPD.

On examination he is pale. His heart sounds are normal and his chest is clear.. He has no ankle oedema and JVP is not raised. His abdomen is soft and he has splenomegaly 3cm below the costal margin with no hepatomegaly.

Test results sent with him by his GP are as follows:

Hb	92 g/l	Na ⁺	143 mmol/l
Platelets	143 * 10 ⁹ /l	K ⁺	3.7 mmol/l
WBC	4 * 10 ⁹ /l	Urea	7 mmol/l
Neuts	2 * 10 ⁹ /l	Creatinine	86 µmol/l
Lymphs	1 * 10 ⁹ /l	CRP	5 mg/l

Blood film: Anisocytosis with mild hypochromia. Tear drop cells. Mild thrombocytopenia with no platelet clumping.

Chest x-ray: Mildly hyperexpanded lung fields. No focal consolidation. No masses or lymphadenopathy.

Upper GI endoscopy & colonoscopy: Normal

Presence of which mutation is required to confirm the likely diagnosis?

	BCR-ABL
	BCL2
	C-MYC

	JAK2
	TP53

Dashboard

Overall score: **0%**

1 -

□ Question 48 of 110



A 70-year-old man is referred to the haematology clinic by his general practitioner with anaemia. He has experienced progressive fatigue and shortness of breath for four months. On further questioning he also describes waking up at night soaked in sweat on one or two nights per week for the last month. His weight is stable. He has a past medical history of hypertension and COPD.

On examination he is pale. His heart sounds are normal and his chest is clear.. He has no ankle oedema and JVP is not raised. His abdomen is soft and he has splenomegaly 3cm below the costal margin with no hepatomegaly.

Test results sent with him by his GP are as follows:

Hb	92 g/l	Na ⁺	143 mmol/l
Platelets	143 * 10 ⁹ /l	K ⁺	3.7 mmol/l
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Chest x-ray: Mildly hyperexpanded lung fields. No focal consolidation. No masses or lymphadenopathy.

Upper GI endoscopy & colonoscopy: Normal

Presence of which mutation is required to confirm the likely diagnosis?

	BCR-ABL
	BCL2
	C-MYC

	JAK2
	TP53

Dashboard

Overall score: **0%**
1 -

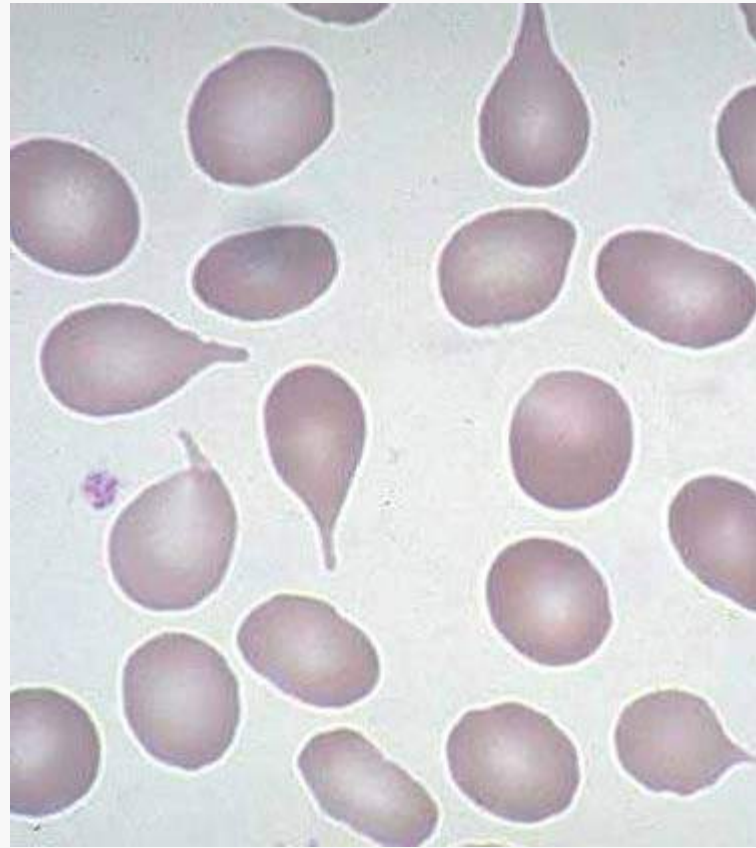
□ Question 48 of 110

A 70-year-old man is referred to the haematology clinic by his general practitioner for progressive fatigue and shortness of breath for four months. He has been soaked in sweat on one or two nights per week for the last month. He has a long history of hypertension and COPD.

On examination he is pale. His heart sounds are normal and his lungs are clear. His abdomen is soft and he has splenomegaly 3cm below the right costal margin.

Test results sent with him by his GP are as follows:

Hb	92 g/l	Na ⁺	143 mmol/l
Platelets	143 * 10 ⁹ /l	K ⁺	3.7 mmol/l
WBC	4 * 10 ⁹ /l	Urea	7 mmol/l
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Upper GI endoscopy & colonoscopy: Normal

Presence of which mutation is required to confirm the likely diagnosis?

	BCR-ABL
	BCL2
	C-MYC

	JAK2
	TP53

Dashboard

Overall score: **0%**
1 -

Question 49 of 110



A 23 year old male of Nigerian descent is referred from the ED with acute shortness of breath associated with fever and dry cough. His shortness of breath has limited him to an exercise tolerance of around 10 yards. He also complains of excruciating right sided chest pain. He is known to have sickle cell anaemia and has had no admissions to the hospital in the last 3 years.

Observations

- heart rate 94bpm regular
- blood pressure 112/74 mmHg
- temperature 38.3
- respiratory rate 22
- urine output under 30ml/hr
- oxygen saturations 93% on room air

Examination

- respiratory system shallow breathing, bronchial breath sounds with crepitations to right base

Blood results:

Hb	7.7 g/dl
Platelets	200 * 10 ⁹ /l
WBC	13.2 * 10 ⁹ /l

Bilirubin	36 µmol/l
Urea	8.2 mmol/l
Creatinine	146 µmol/l

What is the most important initial steps in management?

	Oxygen, IV fluids, antibiotics and analgesia
	2 unit blood transfusion and analgesia
	Oxygen and analgesia only
	Antibiotics and IV fluid only
	Plasmapheresis and analgesia

Dashboard

Overall score: **0%**

1 -

Question 49 of 110



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	Oxygen and analgesia only
	Antibiotics and IV fluid only
	Plasmapheresis and analgesia

Dashboard

Overall score: **0%**

1 -

Question 50 of 110

□ □

A 51-year-old man presents with dysuria and a low grade fever. He is prescribed a course of Nitrofurantoin for a suspected urinary tract infection. He has a history of ischaemic heart disease for which he takes aspirin and atorvastatin. The following day, he notices that his urine has become very dark and he feels breathless and more unwell.

Bloods show:

Hb	78 g/L
WCC	$14.1 \times 10^9/\text{L}$
Neutrophils	$13 \times 10^9/\text{L}$
Platelets	$280 \times 10^9/\text{L}$
Bilirubin	87 mg/dL
ALT	45 IU/L
Alkaline phosphatase	73 IU/L
Urea	5 mmol/L
Creatinine	80 $\mu\text{mol/L}$

Blood film microscopy comments on the presence of Heinz bodies. What is the underlying diagnosis?

	Hereditary spherocytosis
	Paroxysmal nocturnal haemoglobinuria
	Haemolytic uraemic syndrome
	Urinary sepsis secondary to <i>E. coli</i>
	Glucose-6-phosphate dehydrogenase deficiency (G6PD)

Dashboard

Overall score: **0%**

1 -

Question 50 of 110

□ □

A 51-year-old man presents with dysuria and a low grade fever. He is prescribed a course of Nitrofurantoin for a suspected urinary tract infection. He has a history of ischaemic heart disease for which he takes aspirin and atorvastatin. The following day, he notices that his urine has become very dark and he feels breathless and more unwell.

Bloods show:

Hb	78 g/L
WCC	$14.1 \times 10^9/\text{L}$
Neutrophils	$13 \times 10^9/\text{L}$
Platelets	$280 \times 10^9/\text{L}$
Bilirubin	87 mg/dL
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Dashboard

Overall score: **0%**

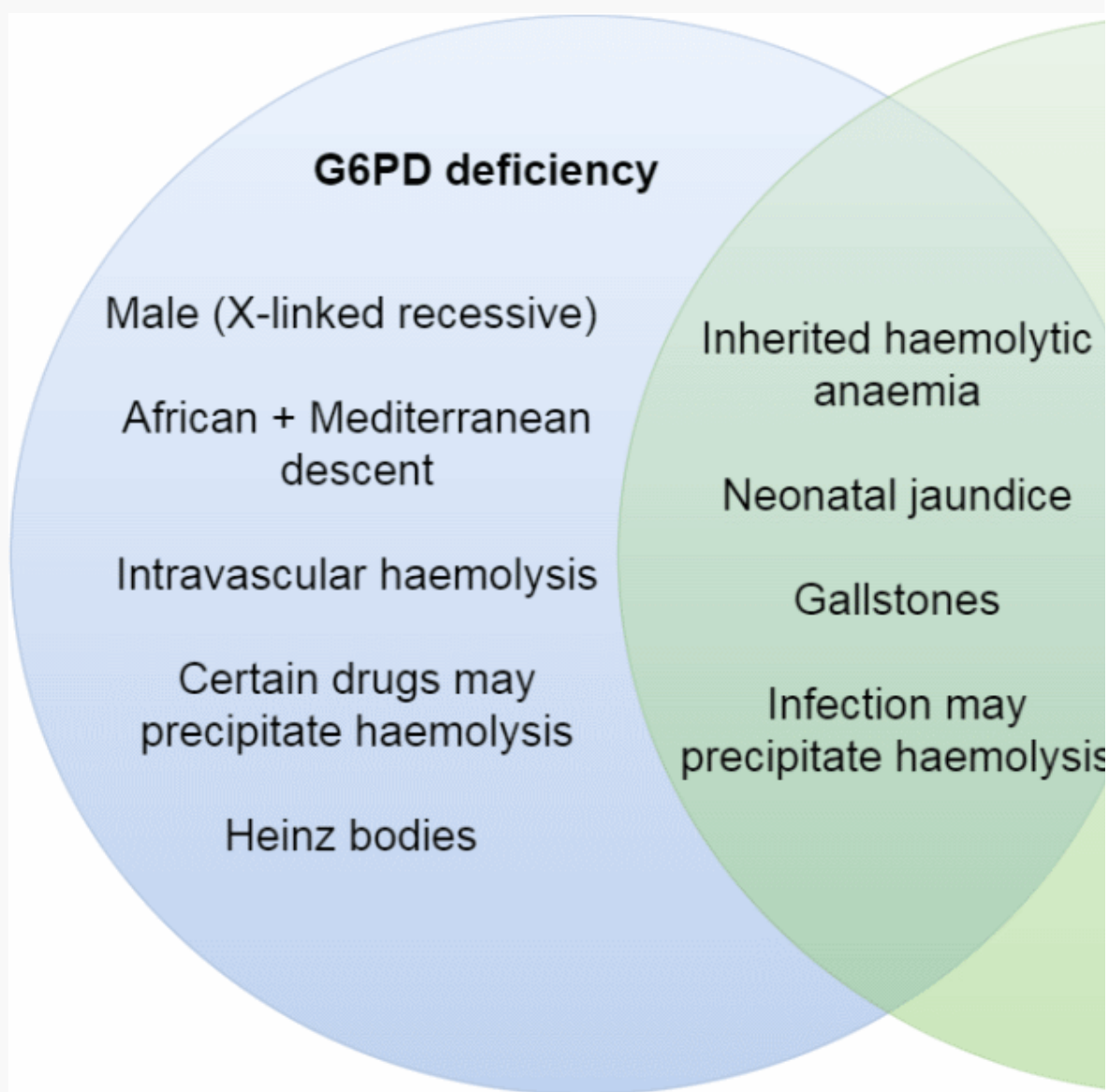
1 -

Question 50 of 110

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Bloods show:

Hb	78 g/L
WCC	14.2 x 10 ⁹ /L
Neutrophils	13 %
Platelets	280 x 10 ⁹ /L
Bilirubin	87 μmol/L
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Creatinine	80 μmol/L



Blood film microscopy comments on the presence of Heinz bodies. What is the underlying diagnosis?

Hereditary spherocytosis
Paroxysmal nocturnal haemoglobinuria
Haemolytic uraemic syndrome
Urinary sepsis secondary to <i>E. coli</i>
Glucose-6-phosphate dehydrogenase deficiency (G6PD)

Dashboard

Overall score: **0%**

1 -

□ Question 51 of 110



A 70 year-old woman presents with severe back pain which has been worsening over the last month. Prior to this she has never suffered from back pain. She has been lethargic, and her husband notes some intermittent confusion. A systemic enquiry reveals long standing exertional breathlessness, and constipation. She has no other bowel or bladder disturbance.

Her background includes chronic obstructive pulmonary disease, which is managed by her GP. She gave up smoking two years ago. Her well woman check up 12 months ago was entirely normal, aside from a slightly raised cholesterol which is being management with diet.

On examination, she has a normal gait. There is some mild tenderness over L3/L4 vertebra with no lower limb neurological deficit. Cardiorespiratory examination reveals an ejection systolic murmur, with a normal second heart sound.

Hb	90 g/l	Na ⁺	135 mmol/l	Bilirubin	5 µmol/l
Platelets	200 * 10 ⁹ /l	K ⁺	5.5 mmol/l	ALP	101 u/l
WBC	10 * 10 ⁹ /l	Urea	15 mmol/l	ALT	40 u/l
Neuts	8 * 10 ⁹ /l	Creatinine	230 µmol/l	corrected calcium	2.7 u/l
ESR	40 mm/hr				

What is the most likely diagnosis?

	Multiple myeloma
	Monoclonal gammopathy of undetermined significance
	Non-Hodgkin's, lymphoma
	Paget's disease
	Renal cell carcinoma with spinal metastases

Dashboard

Overall score: **0%**

1 -

□ Question 51 of 110



A 70 year-old woman presents with severe back pain which has been worsening over the last month. Prior to this she has never suffered from back pain. She has been lethargic, and her husband notes some intermittent confusion. A systemic enquiry reveals long standing exertional breathlessness, and constipation. She has no other bowel or bladder disturbance.

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	Non-Hodgkin's, lymphoma
	Paget's disease
	Renal cell carcinoma with spinal metastases

Dashboard

Overall score: **0%**

1 -

□ Question 52 of 110



A 57 year old man presents to his General Practitioner with persistent headaches and blurred vision. The symptoms have been present over the past six months but have worsened in recent weeks. On close questioning, the patient also reported a feeling of general fatigue and intermittent muscle aches.

One year previously, the patient had been diagnosed with obstructive sleep apnoea secondary to morbid obesity and had been provided with non-invasive ventilation to use at night. However, the patient admitted that he rarely used this equipment due to a dislike for the tight face mask. Despite dietary and lifestyle advice the patient had gained 6 kg over the past year and had a BMI of 41 kg / m².

Neurological examination including fundoscopy was unremarkable. There were no tender or inflamed joints. Blood tests requested by the GP are detailed below.

Haemoglobin	19.5 g / dL
White cell count	7.5 * 10 ⁹ /l
Neutrophils	5.7 * 10 ⁹ /l
Lymphocytes	0.9 * 10 ⁹ /l
Platelets	195 * 10 ⁹ /l
Packed cell volume	0.60
Urea	5.9 mmol / L
Creatinine	110 µmol / L
Sodium	135 mmol / L
Potassium	4.1 mmol / L
eGFR	68 ml / min

Review of a full blood count performed 4 months previously was remarkable for previously unnoticed elevated PCV of 0.56. The patient was urgently referred to haematology for further management.

What is appropriate treatment for this patient's erythrocytosis?

	Aspirin
	Venesection
	Hydroxyurea
	Improved compliance with nocturnal non-invasive ventilation
	Referral to weight management service

Dashboard

Overall score: 0%

1 -

□ Question 52 of 110



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One year previously, the patient had been diagnosed with obstructive sleep apnoea secondary to morbid obesity and had been provided with non-invasive ventilation to use at night. However, the patient admitted that he rarely used this equipment due to a dislike for the tight face mask. Despite dietary and lifestyle advice the patient had gained 6 kg over the past year and had a BMI of 41 kg / m².

Neurological examination including fundoscopy was unremarkable. There were no tender or inflamed joints. Blood tests requested by the GP are detailed below.

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	Aspirin
	Venesection
	Hydroxyurea
	Improved compliance with nocturnal non-invasive ventilation
	Referral to weight management service

Dashboard

Overall score: 0%

1 -

□ Question 53 of 110



You are called to see a 55-year-old gentleman who is having a blood transfusion for symptomatic anaemia secondary to colon cancer. The nurses have been doing regular observations as documented below.

10am: Baseline observations prior to blood transfusion

Respiratory rate 20 breaths/min

Saturations 96% on air

Temperature 37.5 °c

Blood pressure 145/78 mmHg

Heart rate 74 beats/min

10:15 am: repeat observations after 15 mins of transfusion

Respiratory rate 19 breaths/min

Saturations 97% on air

Temperature 38.2 °c

Blood pressure 150/80 mmHg

Heart rate 72 beats/min

The nurses have already stopped the blood transfusion by the time you arrive to see the patient. On questioning the patient he feels well with no complaints of pain, itch or rashes. On examination his heart sounds are pure and chest is clear. He has no previous documented reactions to blood transfusions although the patient informs you he is allergic to penicillin. What instructions do you give the nurses?

	Take blood cultures and commence antibiotics
	Dispose of the remaining blood in the bag
	Restart the blood transfusion after giving the patient paracetamol
	Take blood cultures, repeat chest x ray and perform urinalysis
	Restart the blood transfusion an hour after giving the patient paracetamol

Dashboard

Overall score: **0%**

1 -

Question 53 of 110



You are called to see a 55-year-old gentleman who is having a blood transfusion for symptomatic anaemia secondary to colon cancer. The nurses have been doing regular observations as documented below.

10am: Baseline observations prior to blood transfusion

Respiratory rate 20 breaths/min
 Saturations 96% on air
 Temperature 37.5 °c
 Blood pressure 145/78 mmHg
 Heart rate 74 beats/min

10:15 am: repeat observations after 15 mins of transfusion

Respiratory rate 19 breaths/min
 Saturations 97% on air
 Temperature 38.2 °c
 Blood pressure 150/80 mmHg
 Heart rate 72 beats/min

The nurses have already stopped the blood transfusion by the time you arrive to see the patient. On questioning the patient he feels well with no complaints of pain, itch or rashes. On examination his heart sounds are pure and chest is clear. He has no previous documented reactions to blood transfusions although the patient informs you he is allergic to penicillin. What instructions do you give the nurses?

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	Restart the blood transfusion an hour after giving the patient paracetamol

Dashboard

Overall score: **0%**

1 -

Question 54 of 110

□ □

A 20 year old woman presents to the emergency department with urticaria and hypotension. She was treated as probable anaphylaxis and received adrenaline, chlorphenamine and steroids.

She clinically improved and was admitted to the acute medical unit for observation.

What would be the optimum time intervals for mast cell tryptase measurements?

	At presentation
	6 hours
	At presentation, 1-2 hours, 24 hours
	24 hours
	At presentation, 6 hours

Dashboard

Overall score: 0%

1 -

Question 54 of 110



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What would be the optimum time intervals for mast cell tryptase measurements?

	At presentation
	6 hours
	At presentation, 1-2 hours, 24 hours
	24 hours
	At presentation, 6 hours

Dashboard

Overall score: **0%**

1 -

□ Question 55 of 110

□ □

A 55-year-old lady is seen in the Emergency Department with haematemesis. She developed upper abdominal pain yesterday and began vomiting dark brown material about an hour ago. She has also passed some loose stools today. She recalls having a couple of similar episodes of abdominal pain over the last 2 months but much less severe and not associated with vomiting.

Her past medical history includes hypertension, high cholesterol, type 2 diabetes, atrial fibrillation and chronic back pain. Her medications are bisoprolol, ramipril, atorvastatin, metformin, sitagliptin, apixaban, paracetamol and codeine. She also admits to taking some other over-the-counter pain relief for her back in recent months. She took her regular morning medication 10 hours ago but has not had any since.

On examination her heart rate is 105 beats per minute and blood pressure is 112/88 mmHg. She looks clammy and pale. She is very tender in the epigastric region with guarding and normal bowel sounds. There is malena on rectal examination.

Bloods have been sent but are not yet available, though a haemoglobin on venous gas is 96 g/l.

She is started on fluids and an urgent endoscopy is requested. Which medication should be given to help control the bleeding?

	Activated charcoal and prothrombin complex concentrate
	Activated charcoal and tranexamic acid
	Prothrombin complex concentrate and tranexamic acid
	Vitamin K and prothrombin complex concentrate
	Vitamin K and fresh frozen plasma

Overall score: **0%**

1 -

Question 55 of 110

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Bloods have been sent but are not yet available, though a haemoglobin on venous gas is 96 g/l.

She is started on fluids and an urgent endoscopy is requested. Which medication should be given to help control the bleeding?

	Activated charcoal and prothrombin complex concentrate
	Activated charcoal and tranexamic acid
	Prothrombin complex concentrate and tranexamic acid
	Vitamin K and prothrombin complex concentrate
	Vitamin K and fresh frozen plasma

Overall score: **0%**

1 -

□ Question 56 of 110

□ □

A 67-year-old gentleman presents to the emergency department following a fall. He tripped on the carpet and landed on his back. Following this he has been complaining of lower back pain, but this pain was present prior to his fall and only slightly worsened with the accident. He undergoes a CT scan which unfortunately demonstrates lytic lesions in his lumbar vertebrae. He is suspected of having multiple myeloma. He undergoes blood and urine tests which unfortunately raises further suspicion of the diagnosis. He is due to undergo a bone marrow biopsy. What investigation prior to the biopsy can give prognostic information?

	Serum immunofixation
	B2 microglobulin
	Serum corrected calcium
	Protein electrophoresis
	Urine electrophoresis

Dashboard

Overall score: 0%

1 -

□ Question 56 of 110

□ □

A 67-year-old gentleman presents to the emergency department following a fall. He tripped on the carpet and landed on his back. Following this he has been complaining of lower back pain, but this pain was present prior to his fall and only slightly worsened with the accident. He undergoes a CT scan which unfortunately demonstrates lytic lesions in his lumbar vertebrae. He is suspected of having multiple myeloma. He undergoes blood and urine tests which unfortunately raises further suspicion of the diagnosis. He is due to undergo a bone marrow biopsy. What investigation prior to the biopsy can give prognostic information?

	Serum immunofixation
	B2 microglobulin
	Serum corrected calcium
	Protein electrophoresis
	Urine electrophoresis

Dashboard

Overall score: **0%****1** -

□ Question 57 of 110

□ □

A 34 year old man with chronic immune thrombocytopenia has not responded to medical therapy and so is scheduled to undergo an elective splenectomy. According to guidelines, he requires the following vaccinations:

	Pneumovax (Pneumococcus), Haemophilus Influenzae, MMR (Measles, Mumps, Rubella), Annual influenza vaccine
	Haemophilus Influenzae, Meningococcus C, Annual influenza vaccine
	Pneumovax (Pneumococcus), Haemophilus Influenzae, Meningococcus C, Annual influenza vaccine
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	Meningococcus C, Haemophilus Influenzae, MMR (Measles, Mumps, Rubella), Annual influenza vaccine

Dashboard

Overall score: 0%

1 -

□ Question 57 of 110

□ □

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	Meningococcus C, Haemophilus Influenzae, MMR (Measles, Mumps, Rubella), Annual influenza vaccine

Dashboard

Overall score: **0%****1** -

□ Question 58 of 110



A 37-year-old woman was admitted to the Intensive Care Unit (ICU) two days following chemotherapy. She had received her third of six cycles of chemotherapy for malignant ovarian cancer and without initial complication and was discharged the same day. Two days later she felt unwell and developed a fever. After liaising with the oncology unit she was admitted directly to the Medical Admission Unit. A full septic screen was conducted and she was treated empirically for neutropaenic sepsis with intravenous tazocin and gentamicin. Other than malignant ovarian cancer her past medical history was unremarkable, and there was no known metastasis. She was not taking any other drug therapy and was a non smoker. She did not consume alcohol.

Unfortunately whilst on the Medical Admission Unit she continued to deteriorate, developing fluctuating hemiparesis of initially the left lower limb, and then the right upper limb. Her level of consciousness dropped and her speech had become slurred. An urgent transoesophageal echocardiogram and CT head scan was conducted, pending availability of a MRI scan. She was promptly transferred to the Intensive Care Unit.

Upon arrival at the ICU she appeared very unwell, with a GCS of 12/15. Her blood pressure was 188/96 mmHg, her heart rate was 112, her respiratory rate was 22/min and her temperature was 38.5 degrees celsius. Examination of the cardiovascular system revealed the presence of normal heart sounds, a JVP of 3cm and warm well perfused peripheries. Examination of the respiratory system revealed good air entry in both lungs, with an oxygen saturation of 95% on air. Examination of her gastrointestinal system was unremarkable. Examination of her neurological system revealed localization to pain stimulus, with confusion and eye opening only in response to verbal prompting. Her speech was slurred. There was no other apparent focal neurological deficit, with otherwise normal cranial nerve and peripheral nervous system testing.

The results of the investigations conducted are as follows:

Hb	89g/l
Platelets	$38 \times 10^9/l$
WBC	$15.2 \times 10^9/l$
Reticulocyte count	4% (ie above normal range)
Blood film	presence of schistocytes, normocytic normochromic anaemia

Na ⁺	136 mmol/l
K ⁺	6.1 mmol/l
Urea	10.1 mmol/l
Creatinine	154 µmol/l

CRP	22 mg/l
ESR	45 mm/hr
Protein	78 g/l
Albumin	36 g/l
Adj calcium	2.42 mmol/l
Phosphate	0.95 mmol/l
Bilirubin	44 µmol/l
ALT	39 u/l
LDH	1286 u/l
ALP	102 u/l
PTT	14s
APTT	44s
INR	1.1
D-dimer	136 ng/ml

Chest x-ray: normal heart and lung appearances

ECG: heart rate 107bpm normal sinus rhythm, normal QRS and QTc intervals

Urinalysis: proteinuria ++, haematuria +, leuc/nit/glu negative

Blood MCS x3: pending result

Urine MCS: pending result

CT head: no space occupying lesion, mass shift or intracerebral haemorrhage seen

Transoesophageal echocardiogram: normal systolic function, normal appearance of all valves, no evidence of vegetation seen

In the context of the likely underlying diagnosis, what is the best immediate management step?

	Commence immediate plasma exchange
	Commence high dose intravenous hydrocortisone
	Commence platelet infusion
	Commence IV meropenem and IV antifungal therapy

Dashboard

Overall score: **0%**

1 -

□ Question 58 of 110



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Dashboard

Overall score: **0%**

1 -

□ Question 59 of 110



You are seeing a 35 year old gentleman in outpatient renal clinic with known CKD5 (chronic kidney disease stage 5) as a consequence of analgesic induced nephropathy. He tells you that over the past few weeks he has been feeling increasingly tired and has noticed that he's been having headaches. Asking more about his tiredness he states that he can get around his house, but has noticed increased shortness of breath when climbing the stairs. On examination it is clear that he has pale mucous membranes and a slightly hyperdynamic circulation.

Bloods taken from the morning are as follows:

Hb	82 g/l
Platelets	154 * 10 ⁹ /l
WBC	2.7 * 10 ⁹ /l
Bilirubin	14 µmol/l
ALP	154 u/l
ALT	7 u/l
Albumin	28 g/l
Ferritin	350 ng/ml
Transferrin saturations	24%
B12	451 pg/ml
Folate	4.8 nmol/nl
TSH	2.1 mIU/L

How would you manage this patient's anaemia?

	Start ferrous fumarate 210mg three times daily
	Intravenous iron infusion guided by weight and Hb

	Start an ESA (erythrocyte colony stimulating agent)
	Transfuse 1 unit of packed red cells
	Transfuse 1 unit of packed red cells then start an ESA (erythrocyte colony stimulating agent)

Dashboard

Overall score: **0%**

1 -

□ Question 59 of 110



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Intravenous iron infusion guided by weight and Hb

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	Transfuse 1 unit of packed red cells
	Transfuse 1 unit of packed red cells then start an ESA (erythrocyte colony stimulating agent)

Dashboard

Overall score: **0%**
1 -

□ Question 60 of 110

□ □

A 77-year-old lady was seen in the haematology outpatient clinic for her monthly follow-up. She has been seen in the haematology clinic for the last six months having been referred by her GP following an anomaly on her blood investigations. Overall she has been feeling well though for the last three weeks she has been feeling increasingly tired. She has noted that her appetite has been reduced for the last three months though she has not lost any weight during this time. In spite of the tiredness she is still able to lead an active life, regularly enjoying long distance rambling and gardening. She denied the presence of other symptoms, including the absence of fever or night sweats. She has a past medical history comprising asthma, hypertension, type 2 diabetes mellitus and hypercholesterolaemia for which she has been prescribed felodipine 5mg M/R OD, atorvastatin 20mg ON, Clenil modulite 2 puffs BD and metformin 500mg TDS.

Examination revealed the presence of a well elderly lady who was independently mobile. Her blood pressure was 122/82 mmHg, heart rate 82bpm and temperature 36.9 Celsius. Examination of her cardiovascular and respiratory systems revealed the presence of normal heart and breath sounds and a JVP of 3cm. Examination of her gastrointestinal and lymphatic systems revealed the presence of a smooth edge 2 fingerbreadth below the left subcostal margin and bilateral small cervical lymphadenopathy, with the maximum node size less than 1cm.

Investigations reveal the following:

Results from clinic three months ago:

Hb	112 g/l
Platelets	$242 \times 10^9/l$
WBC	$22.6 \times 10^9/l$
Neutrophils	$2.1 \times 10^9/l$
Lymphocytes	$19.9 \times 10^9/l$
Eosinophils	$0.4 \times 10^9/l$
Monocytes	$0.2 \times 10^9/l$

Renal and liver function tests were normal.

Blood film: lymphocytosis with atypical lymphocytes

Bone marrow aspirate: infiltration with 25% lymphocytes
Peripheral blood flow cytometry: presence of circulating clonal B-lymphocytes expressing CD5, CD19, CD20, CD 23, and an absence of FMC-7 staining

Results from clinic on this occasion:

Hb	106 g/l
Platelets	162 * 10 ⁹ /l
WBC	34.2 * 10 ⁹ /l
Neutrophils	2.3 * 10 ⁹ /l
Lymphocytes	31.5 * 10 ⁹ /l
Eosinophils	0.3 * 10 ⁹ /l
Monocytes	0.1 * 10 ⁹ /l

What is the single next best step management step?

	Commence prednisolone therapy
	Commence chlorambucil therapy
	Commence fludarabine therapy
	Commence rituximab therapy
	Observe in clinic and repeat tests in one month

Dashboard

Overall score: 0%

1 -

□ Question 60 of 110

□ □

A 77-year-old lady was seen in the haematology outpatient clinic for her monthly follow-up. She has been seen in the haematology clinic for the last six months having been referred by her GP following an anomaly on her blood investigations. Overall she has been feeling well though for the last three weeks she has been feeling increasingly tired. She has noted that her appetite has been reduced for the last three months though she has not lost any weight during this time. In spite of the tiredness she is still able to lead an active life, regularly enjoying long distance rambling and gardening. She denied the presence of other symptoms, including the absence of fever or night sweats. She has a past medical history comprising asthma, hypertension, type 2 diabetes mellitus and hypercholesterolaemia for which she has been prescribed felodipine 5mg M/R OD, atorvastatin 20mg ON, Clenil modulite 2 puffs BD and metformin 500mg TDS.

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Eosinophils	0.4 * 10 ⁹ /l
Monocytes	0.2 * 10 ⁹ /l

Renal and liver function tests were normal.

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Monocytes	0.1 * 10 ⁹ /l

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	Commence chlorambucil therapy
	Commence fludarabine therapy
	Commence rituximab therapy
	Observe in clinic and repeat tests in one month

Dashboard

Overall score: 0%

1 -

Question 61 of 110

A 72-year-old woman with breast cancer presents with a swollen, painful left calf. She is known to have metastases in the vertebral bodies and is taking denosumab as prophylaxis. A Doppler ultrasound is arranged which shows a proximal deep vein thrombosis on the left side. This is her first episode of venous thromboembolism. What is the most appropriate management?

	Warfarin for 3 months
	Warfarin for 6 months
	Low-molecular weight heparin for 3 months
	Low-molecular weight heparin for 6 months
	Dabigatran for 3 months

Dashboard

Overall score: **0%**

1 -

Question 61 of 110

A 72-year-old woman with breast cancer presents with a swollen, painful left calf. She is known to have metastases in the vertebral bodies and is taking denosumab as prophylaxis. A Doppler ultrasound is arranged which shows a proximal deep vein thrombosis on the left side. This is her first episode of venous thromboembolism. What is the most appropriate management?

	Warfarin for 3 months
	Warfarin for 6 months
	Low-molecular weight heparin for 3 months
	Low-molecular weight heparin for 6 months
	Dabigatran for 3 months

Dashboard

Overall score: **0%**

1 -

□ Question 62 of 110



A 33 year female of Arabic descent with bullous pemphigus is admitted electively for intravenous immunoglobulins. She has no other past medical history, no recent travel history and has lived in rural Norfolk her whole life. On day 4 of a 5 day planned course of treatment, she develops pyrexia, nausea and vomiting. On examination, you note mild neck stiffness and photophobia. She also complains of a posterior headache. Her serum markers are as below:

WBC	14.0 * 10 ⁹ /l
Neuts	11.0 * 10 ⁹ /l

Na ⁺	133 mmol/l
K ⁺	3.8 mmol/l
Urea	4.7 mmol/l
Creatinine	80 µmol/l
CRP	4 mg/l

A CT head is unremarkable. The immunoglobulin is stopped. You perform a lumbar puncture: WCC 10/mm³, protein 0.4g/L, no organisms, opening pressure 17.8 cm H₂O. Blood cultures taken during a temperature spike grow no organisms after 48 hours. What is the diagnosis?

	Aseptic meningitis
	Bullous pemphigus flare
	TB reactivation, resulting in TB meningitis
	Viral meningitis
	Bacterial meningitis

Overall score: **0%**

1 -

□ Question 62 of 110



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K ⁺	3.8 mmol/l
Urea	4.7 mmol/l
Creatinine	80 µmol/l
CRP	4 mg/l

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	Bullous pemphigus flare
	TB reactivation, resulting in TB meningitis
	Viral meningitis
	Bacterial meningitis

Dashboard

Overall score: **0%**

1 -

□ Question 63 of 110



A 52 year old female with known advanced breast carcinoma presents with a three week history of increased abdominal and lower limb swelling. She denies any shortness of breath or chest pain. She is currently undergoing third line palliative chemotherapy and on her last staging CT scan, she has stable disease but with metastases to her lungs, livers, multiple lymph nodes and right sacrum. She has not changed her medications recently. On examination, her cardiovascular and chest examination are unremarkable. You note sacral oedema and pitting oedema on both legs to thighs. Her abdomen is grossly distended and the patient informs you that this has gradually increased over the past month. JVP is not visualised. She is warm and well perfused peripherally. There is mild shifting dullness and areas of resonance, bowel sounds are present. Her blood test demonstrate:

Hb	10.8 g/dl
Platelets	$212 \times 10^9/l$
WBC	$7.8 \times 10^9/l$
INR	1.6

Bilirubin	40 $\mu\text{mol/l}$
ALP	60 u/l
ALT	380 u/l
Albumin	39 g/l

Which investigation is most likely to reveal the cause of this deterioration?

	CT chest, abdomen, pelvis with contrast
	CT venogram
	Ultrasound abdomen
	Echocardiogram

	Ascitic tap (diagnostic)
--	--------------------------

Dashboard

Overall score: **0%**

1 -

□ Question 63 of 110



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	Ascitic tap (diagnostic)
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Dashboard

Overall score: **0%**
1 -

Question 64 of 110

□ □

A 27 year old woman presents to the Emergency Department with a sudden onset of swelling of the hands and face. She describes multiple similar episodes over the past few years, but this episode is the most severe. She cannot recall any obvious precipitant. On previous occasions the symptoms have subsided within thirty minutes but on this occasion they have worsened over the course of an hour. On examination, there is significant swelling of the lips which are dry and shiny. The tongue is not enlarged. There is no stridor and the chest is clear. Respiratory rate is 22 and oxygen saturations are 96% on air. The hands are swollen and slightly erythematous but there is no pain or itching and no lymphadenopathy. Heart rate is 106bpm and blood pressure is 118/79mmHg. Tympanic temperature is 36.7°C. A diagnosis of hereditary angioedema is suspected.

Which one of the following is not implicated in the pathogenesis of hereditary angioedema?

	C1-esterase inhibitor
	Bradykinin
	Histamine
	Kallikrein
	High molecular weight kininogen

Dashboard

Overall score: 0%

1 -

□ Question 64 of 110

□ □

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	Bradykinin
	Histamine
	Kallikrein
	High molecular weight kininogen

Dashboard

Overall score: **0%****1** -

□ Question 65 of 110

□ □

A 29-year-old woman who is a former intravenous drug user is seen in the hepatology clinic. She is 12 weeks pregnant and has been referred as she is known to have chronic hepatitis C. Twelve months ago she was treated with pegylated interferon-alpha, ribavirin and a protease inhibitor which failed to result in her clearing the hepatitis C virus.

What is the most appropriate way, if any, to reduce the risk of vertical transmission?

	Caesarean section
	Further course of antiviral therapy during pregnancy
	Advise against breastfeeding
	Antiviral therapy for the neonate for the first 4 weeks
	None of the above interventions is recommended

Dashboard

Overall score: 0%

1 -

□ Question 65 of 110

□ □

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	Caesarean section
	Further course of antiviral therapy during pregnancy
	Advise against breastfeeding
	Antiviral therapy for the neonate for the first 4 weeks
	None of the above interventions is recommended

Dashboard

Overall score: **0%**

1 -

□ Question 66 of 110



A 35-year-old patient with known sickle cell disease presents to the emergency department with new onset of left arm and facial weakness. The symptoms began earlier in the day. He is normally very careful with his sickle disease and ensures he is well hydrated and avoids the cold. His wife admits that over the last few days he has been suffering from nausea and vomiting and diarrhoea after he had a takeaway meal 3 days ago, On examination he his observations are within normal parameters. He has slurred speech and an obvious left facial droop with forehead sparing. He has power of 0/5 in his left arm but is otherwise neurologically intact.

His blood test show:

Hb	100 g/l
Platelets	330 * 10 ⁹ /l
WBC	8.9 * 10 ⁹ /l
INR	1.0

Na ⁺	138 mmol/l
K ⁺	3.5 mmol/l
Urea	9.9 mmol/l
Creatinine	135 µmol/l
CRP	19 mg/L(<10)

Bilirubin	12 µmol/l
ALP	89 u/l
ALT	39 u/l
Albumin	39 g/l

He is seen by the stroke team who arrange an urgent CT head which is reported as normal. What is the appropriate

treatment for this gentleman?

	Thrombolysis
	Aspirin
	Plasmapheresis
	Methylprednisolone
	Exchange transfusion

Dashboard

Overall score: 0%

1 -

□ Question 66 of 110



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Dashboard

Overall score: **0%**
1 -

□ Question 67 of 110

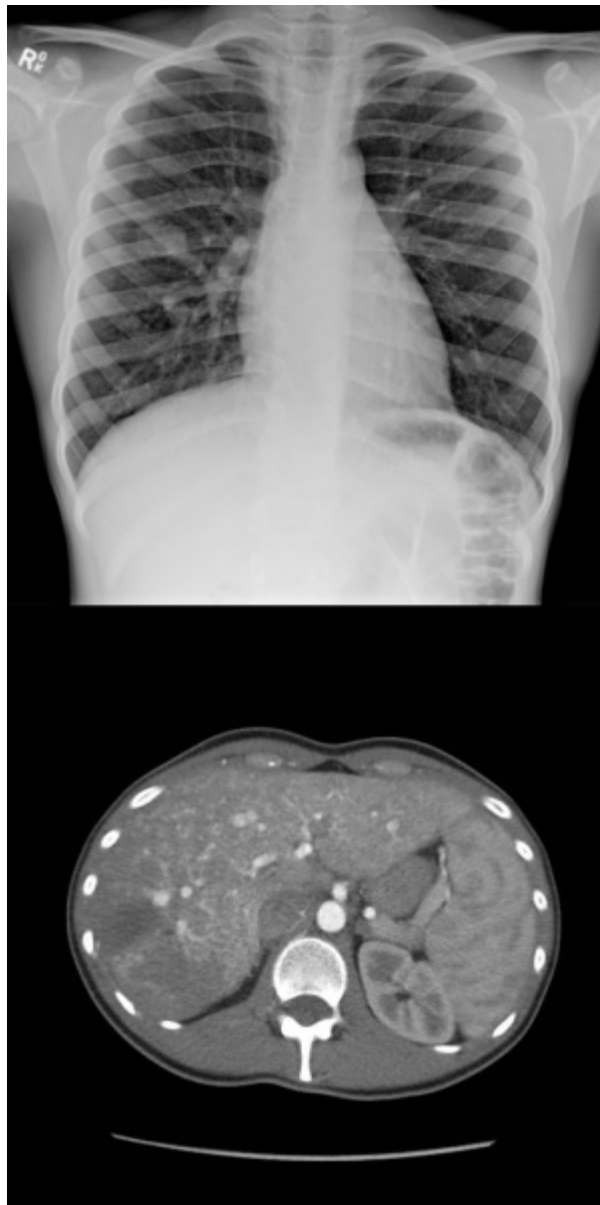
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A 16-year-old male is investigated for recurrent epistaxis, haemoptysis and iron-deficiency anaemia. Blood tests show the following:

Hb	11.1 g/dl
Platelets	$341 \times 10^9/l$
WBC	$4.3 \times 10^9/l$

Bilirubin	33 $\mu\text{mol/l}$
ALP	131 u/l
ALT	54 u/l
γGT	135 u/l
Albumin	40 g/l

A chest x-ray and CT abdomen are requested:



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What is the most likely diagnosis?

	Acute lymphoblastic leukaemia
	Metastatic cancer secondary to familial adenomatous polyposis
	Hereditary haemorrhagic telangiectasia
	Metastatic pleuropulmonary blastoma
	Peutz-Jeghers syndrome

Dashboard

Overall score: **0%**

1 -

Question 67 of 110

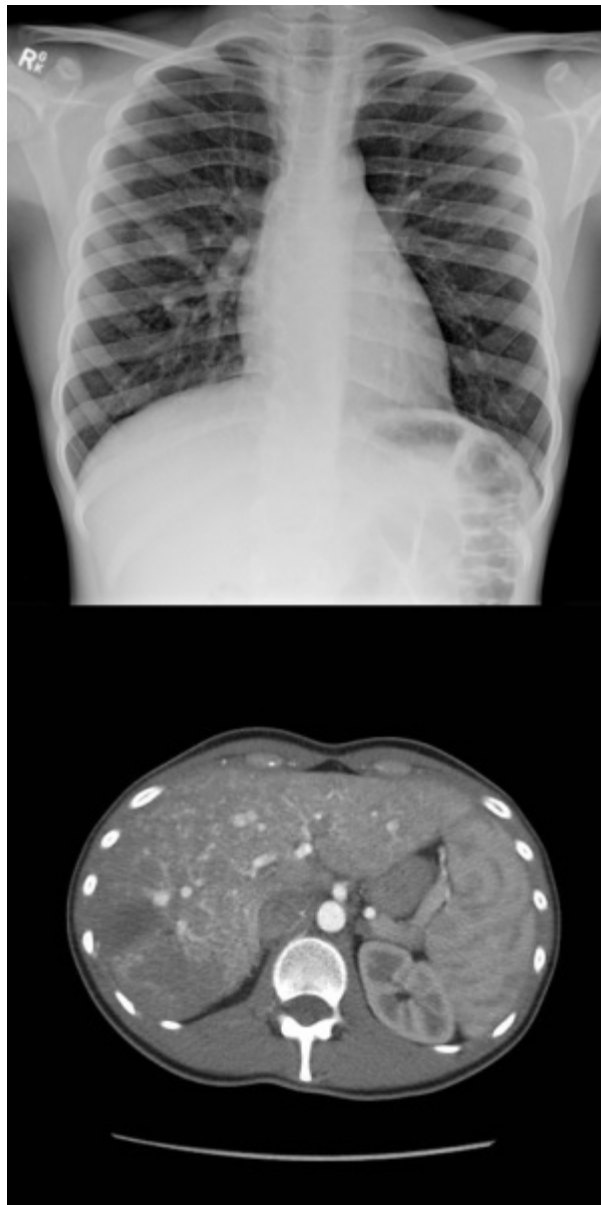
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	Metastatic pleuropulmonary blastoma
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Dashboard

Overall score: **0%**

1 -

□ Question 71 of 110

□ □

A 30-year-old woman presents to the emergency department with severe, progressive abdominal pain over the past day. The pain is accompanied by nausea, vomiting and diarrhoea. The patient recalls similar episodes in the past that progressed over a few days and lasted for a week. Temperature is 37°C, blood pressure is 140/100 mmHg, pulse is 120/min and respirations are 16/min.

On examination: minimal abdominal tenderness and rebound tenderness. She has a history of abdominal surgery for suspected appendicitis and biliary disease, neither of which was confirmed once inside the abdomen.

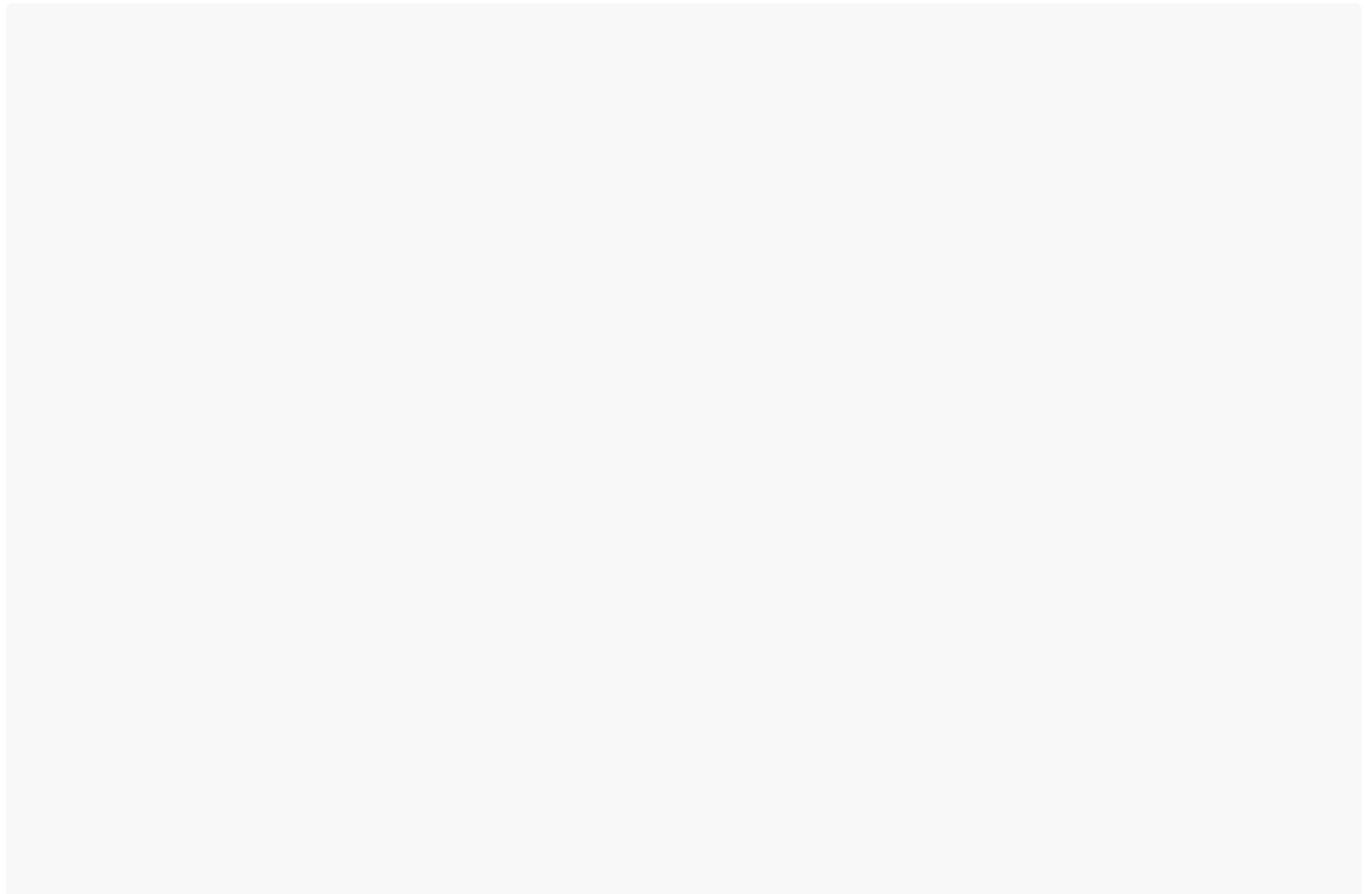
Which of the following will help to confirm the diagnosis?

	Erythrocyte porphyrins
	Faecal porphyrins
	Plasma porphyrins
	Urine porphobilinogen
	Urine porphyrins

Dashboard

Overall score: 0%

1 -



Mitochondria

Cytosol

Glycine + succinyl-CoA

Sideroblastic
anemia

ALA synthase

δ -aminolevulinic acid

Lead poisoning

ALA dehydratase

Porphobilinogen

Porphobilinogen deaminase

AIP

Hydroxymethylbilane

Uroporphyrinogen III

Uroporphyrinogen
decarboxylase

PCT

Coproporphyrinogen III

Protoporphyrin

Fe^{2+}

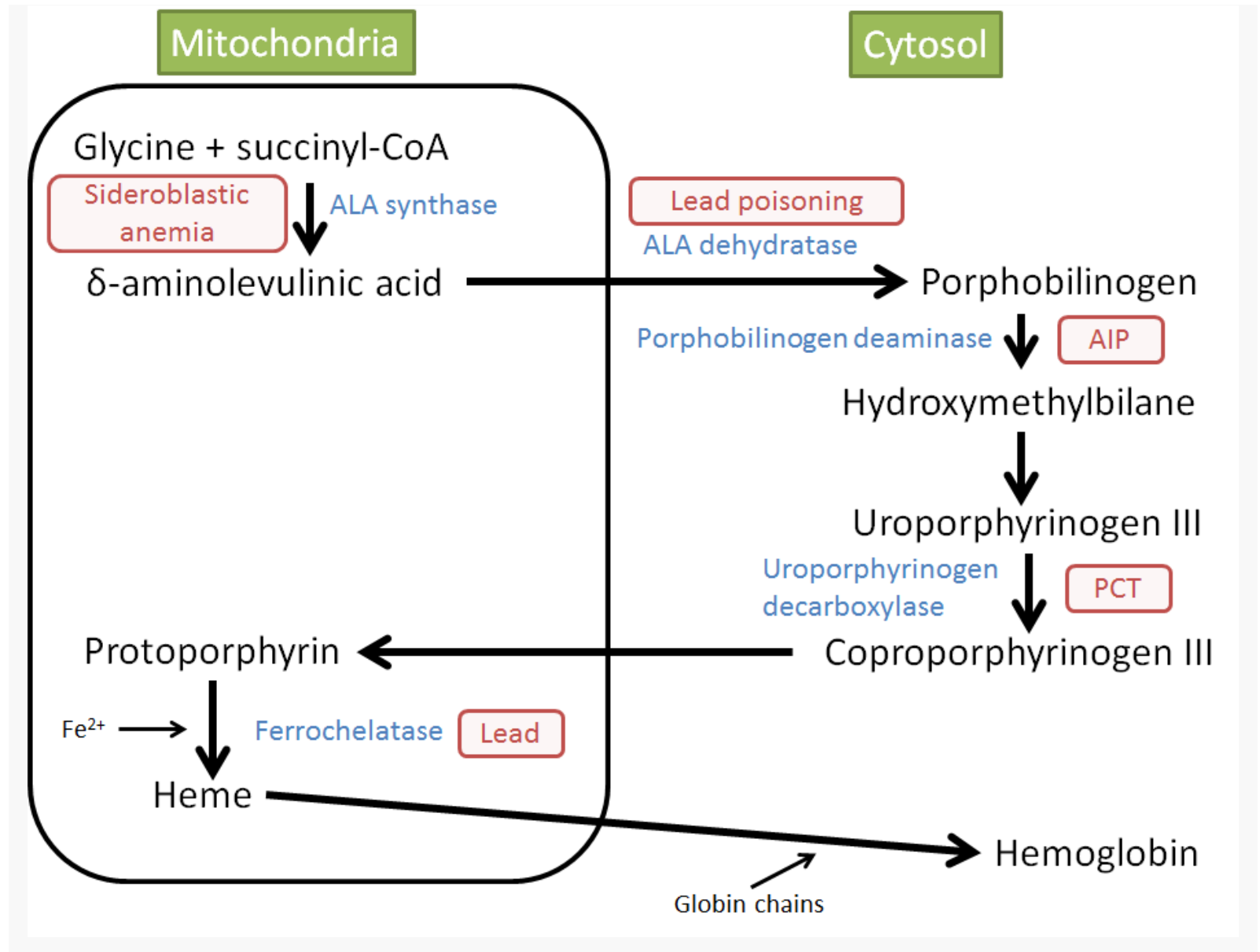
Ferrochelatase

Lead

Heme

Hemoglobin

Globin chains



Question 68 of 110



A 60-year-old female patient is receiving etanercept for long term rheumatoid arthritis. She attends the general medical clinic with increasing shortness of breath on exertion. She has received treatment for arthritis for many years and has in the past received methotrexate. This was stopped due recurrent infections. She has had no recent courses of steroids. Her symptoms of arthritis are well controlled on her current treatment regimen.

On examination the patient had a blunted affect. Her tongue appeared mildly swollen and red with some area of soreness at the corners of her mouth. She did not exhibit finger clubbing but the nails appeared brittle. Her pulse was 92 bpm and her blood pressure 106/68 mmHg. Examination of her cardiorespiratory system revealed normal heart sounds with no added sounds and the occasional fine crepitation in her lung fields.

Basic investigations such as blood tests and a chest x-ray were undertaken. Results are shown below.

Hb	8.2 g/dl
MCV	109fl
Haematocrit	0.39
Platelets	$380 \times 10^9/l$
WBC	$9.4 \times 10^9/l$

Renal function	normal
Liver function	normal

CXR	normal
-----	--------

	Pernicious anaemia
	Sideroblastic anaemia

	Anaemia of chronic disease
	Iron deficiency anaemia
	Aplastic anaemia

Dashboard

Overall score: **0%**

1 -

Question 68 of 110



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-----	--------

Pernicious anaemia

Sideroblastic anaemia

	Anaemia of chronic disease
	Iron deficiency anaemia
	Aplastic anaemia

Dashboard

Overall score: **0%**
1 -

□ Question 69 of 110



A 70-year-old man is admitted to hospital with shortness of breath and a productive cough. Following initial investigation a community-acquired pneumonia is diagnosed and treatment with IV fluids and IV antibiotics initiated promptly. Subcutaneous enoxaparin for venous thromboprophylaxis was initiated on the day of admission. Due to persistent hypotension and oliguria secondary due to presumed septic shock, the patient was admitted to the General Intensive Care Unit for inotropic support around 12 hours after initial presentation.

The patient's past medical history featured a previous ST elevation myocardial infarction, treated with primary percutaneous coronary interventions one year previously. Regular medications included Aspirin, Clopidogrel, Ramipril, Bisoprolol and Atorvastatin. The patient had no known drug allergies and lived independently in a house with his wife.

With the above management, the patient's condition stabilised and he was discharged to a respiratory ward on day 3 of the admission. Routine blood tests taken on day 7 of admission demonstrated a marked fall in platelet count compared to admission bloods. Full examination of the patient at this time did not demonstrate any evidence of venous thrombosis with no skin changes. Following advice from haematology further investigations were requested as detailed below.

Blood results	Day 0 (admission)	Day 3	Day 7
Platelets ($\times 10^9$ / microlitre)	189	156	87
International normalised ratio	1.1	1.3	1.2

Heparin induced thrombocytopenia antibodies: positive (moderate titre)

What further investigation is required (if any) to confirm a diagnosis of heparin induced thrombocytopenia?

	Serotonin release assay
	Repeat heparin induced thrombocytopenia antibodies
	Venous doppler ultrasound of lower limbs
	Fibrinogen break-down products

No further investigation required

Dashboard

Overall score: **0%**

1 -

□ Question 69 of 110



A 70-year-old man is admitted to hospital with shortness of breath and a productive cough. Following initial investigation a community-acquired pneumonia is diagnosed and treatment with IV fluids and IV antibiotics initiated promptly. Subcutaneous enoxaparin for venous thromboprophylaxis was initiated on the day of admission. Due to persistent hypotension and oliguria secondary due to presumed septic shock, the patient was admitted to the General Intensive Care Unit for inotropic support around 12 hours after initial presentation.

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	Repeat heparin induced thrombocytopenia antibodies
	Venous doppler ultrasound of lower limbs
	Fibrinogen break-down products

No further investigation required

Dashboard

Overall score: **0%**

1 -

□ Question 70 of 110

□ □

A 77-year-old man with known atrial fibrillation is admitted following an upper gastrointestinal haemorrhage. His atrial fibrillation is managed using bisoprolol and warfarin. Since his admission, he has had four large episodes of haematemesis. You, the emergency department doctor, request the patient's INR to be checked as one of a series of investigations. The haematology laboratory phone through and inform you his INR is 8.5. He is currently hypotensive (90/45 mmHg) and tachycardic (120 beats per minute). You begin resuscitation using 0.9% saline, and send a cross match, group and save. What is the most appropriate treatment of this patient's INR?

	Fresh frozen plasma + stop warfarin
	Vitamin K + stop warfarin
	Prothrombin complex concentrates
	Prothrombin complex concentrates + vitamin K + stop warfarin
	Stop warfarin

Dashboard

Overall score: 0%

1 -

□ Question 70 of 110

□ □

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	Fresh frozen plasma + stop warfarin
	Vitamin K + stop warfarin
	Prothrombin complex concentrates
	Prothrombin complex concentrates + vitamin K + stop warfarin
	Stop warfarin

Dashboard

Overall score: 0%

1 -

Question 71 of 110

□ □

A 30-year-old woman presents to the emergency department with severe, progressive abdominal pain over the past day. The pain is accompanied by nausea, vomiting and diarrhoea. The patient recalls similar episodes in the past that progressed over a few days and lasted for a week. Temperature is 37°C, blood pressure is 140/100 mmHg, pulse is 120/min and respirations are 16/min.

On examination: minimal abdominal tenderness and rebound tenderness. She has a history of abdominal surgery for suspected appendicitis and biliary disease, neither of which was confirmed once inside the abdomen.

Which of the following will help to confirm the diagnosis?

	Erythrocyte porphyrins
	Faecal porphyrins
	Plasma porphyrins
	Urine porphobilinogen
	Urine porphyrins

Dashboard

Overall score: 0%

1 -

□ Question 71 of 110

□ □

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	Urine porphyrins

Dashboard

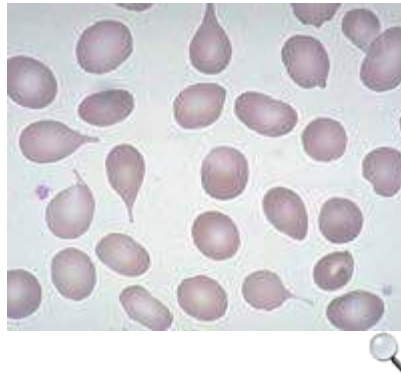
Overall score: **0%****1** -

□ Question 72 of 110

□ □

A 77-year-old man is referred to haematology for investigation of anaemia. For several months he has been complaining of fatigue and weight loss. His GP has already arranged upper and lower gastrointestinal (GI) endoscopy which has been reported as normal.

His blood film is shown below:



What is the most likely diagnosis?

	Chronic lymphocytic leukaemia
	Myelofibrosis
	Iron deficiency anaemia (bleeding from non-GI source)
	Hyposplenism
	Autoimmune hemolytic anaemia

Overall score: **0%**

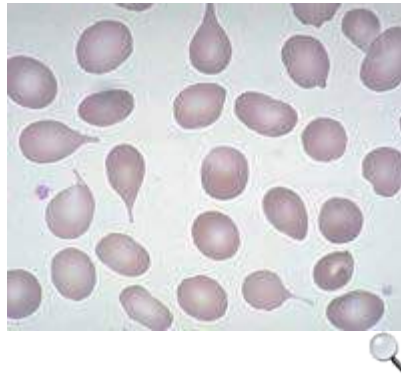
1 -

□ Question 72 of 110

□ □

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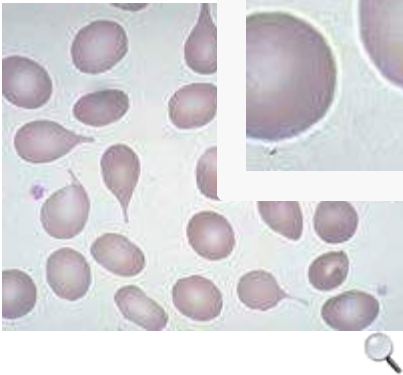
Overall score: **0%**

1 -

Question 72 of 110

A 77-year-old man is referred to haematology for investigation of fatigue and weight loss. His GP has already arranged upper GI endoscopy, which has been reported as normal.

His blood film is shown below:



What is the most likely diagnosis?

Chronic lymphocytic leukaemia
Myelofibrosis
Iron deficiency anaemia (bleeding from non-GI source)
Hyposplenism
Autoimmune hemolytic anaemia

Overall score: **0%**

1 -

Question 73 of 110

□ □

A 41-year-old patient receiving treatment for breast cancer presents to the Day Unit with a swollen right leg. She had a left mastectomy and axillary clearance 3 months ago and is currently receiving her second cycle of FEC (epirubicin, cyclophosphamide and fluorouracil) chemotherapy. Ultrasound doppler confirms a deep vein thrombosis of the right superficial femoral vein. The patient's renal function is normal.

What is the most appropriate treatment for this patient?

	Rivaroxaban for 3 months and reassess VTE risk
	Warfarin for six months and reassess VTE risk
	Low molecular weight heparin for 6 months and reassess venous thromboembolism (VTE) risk
	Warfarin for 3 months and reassess VTE risk
	Low molecular weight heparin for 3 months and reassess VTE risk

Dashboard

Overall score: 0%

1 -

□ Question 73 of 110



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	Warfarin for six months and reassess VTE risk
	Low molecular weight heparin for 6 months and reassess venous thromboembolism (VTE) risk
	Warfarin for 3 months and reassess VTE risk
	Low molecular weight heparin for 3 months and reassess VTE risk

Dashboard

Overall score: **0%**

1 -

□ Question 74 of 110



A 32 year old male presents with a progressive worsening non-specific lethargy. 9 months ago, he had returned from an active holiday from New Zealand and now feels lethargic to the point that he can no longer work in his job as a computer programmer. In this period, he has been treated for two deep vein thromboses with low molecular heparin, the first initially attributed to his return flight from New Zealand. He reports three episodes of rose coloured urine over the past 4 months and intermittent episodes of abdominal cramps that his GP had diagnosed to be irritable bowel syndrome.

On examination, you note mild conjunctival pallor and jaundiced sclera. Respiratory, cardiovascular and abdominal examinations are unremarkable. His blood results are as follows:

Hb	7.6 g/dl
fl	
MCV	92 fl
Platelets	$276 \times 10^9/l$
WBC	$4.1 \times 10^9/l$
Reticulocytes	18%
Haptoglobin	2 (normal range 41-165 mg/dL)
LDH	2128 (normal range 140-280 units/L)
Coombs' test	negative at 4 and 37 degrees

What is the definitive treatment for the underlying condition?

	Packed red blood cell transfusion
	Anti-retroviral treatment
	Bone marrow transplant
	R-CHOP chemotherapy

	Intravenous iron replacement

Dashboard

Overall score: **0%**

1 -

□ Question 74 of 110



A 32 year old male presents with a progressive worsening non-specific lethargy. 9 months ago, he had returned from an active holiday from New Zealand and now feels lethargic to the point that he can no longer work in his job as a computer programmer. In this period, he has been treated for two deep vein thromboses with low molecular heparin, the first initially attributed to his return flight from New Zealand. He reports three episodes of rose coloured urine over the past 4 months and intermittent episodes of abdominal cramps that his GP had diagnosed to be irritable bowel syndrome.

On examination, you note mild conjunctival pallor and jaundiced sclera. Respiratory, cardiovascular and abdominal examinations are unremarkable. His blood results are as follows:

Hb	7.6 g/dl
fl	
MCV	92 fl
Platelets	$276 \times 10^9/l$
WBC	$4.1 \times 10^9/l$
Reticulocytes	18%
Haptoglobin	2 (normal range 41-165 mg/dL)
LDH	2128 (normal range 140-280 units/L)
Coombs' test	negative at 4 and 37 degrees

What is the definitive treatment for the underlying condition?

	Packed red blood cell transfusion
	Anti-retroviral treatment
	Bone marrow transplant
	R-CHOP chemotherapy

	Intravenous iron replacement

Dashboard

Overall score: **0%**
1 -

□ Question 75 of 110



A 50-year-old gentleman presented with a 3 day history of left leg swelling and pain. He denied any chest pain or breathlessness. His past medical history included ischaemic heart disease, diabetes and hypertension. He maintains an active lifestyle and he had no risk factors for venous thromboembolism. He is an ex-smoker (20 pack year history).

On examination his heart sounds were normal, chest was clear and abdomen was soft and non-tender. His vitals include heart rate = 70 beats per minute, blood pressure = 140/70 mmHg, SaO₂ = 99% on air, T = 36.6°C and respiratory rate = 16 breaths per minute. His chest X-ray was normal, ECG revealed sinus rhythm and urine was clear. The following blood tests have been obtained:

Hb	10.5 g/dl
Platelets	250 * 10 ⁹ /l
WBC	10.4 * 10 ⁹ /l
D-dimer	Positive

Na ⁺	133 mmol/l
K ⁺	4.6 mmol/l
Urea	7.2 mmol/l
Creatinine	101 µmol/l
CRP	10 mg/l

Bilirubin	12 µmol/l
ALP	140 u/l
ALT	30 u/l
Corrected Ca ²⁺	2.60 mmol/l

Albumin	35 g/l
---------	--------

Ultrasound of the left leg revealed an extensive thrombus.

What is the next best investigation?

	Computed tomography of abdomen / pelvis
	Echocardiogram
	Computed tomography pulmonary angiography
	Thrombophilia screen
	V/Q scan

Dashboard

Overall score: **0%**

1 -

□ Question 75 of 110



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	Echocardiogram
	Computed tomography pulmonary angiography
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Dashboard

Overall score: **0%**

1 -

□ Question 76 of 110



A 62 year old man is attending his GP as part of regular screening. He has a past medical history significant only for hypertension for which he has been taking amlodipine for many years. He reports no specific symptoms of note and is still working full time as an accountant. His blood pressure on this visit is 132/78mmHg and his urinalysis shows no abnormalities. Blood tests were taken for routine monitoring.

Hb	13.8 g/dl
Platelets	$362 \times 10^9/l$
WBC	$6.3 \times 10^9/l$

Na ⁺	142 mmol/l
K ⁺	4.2 mmol/l
Urea	4.6 mmol/l
Creatinine	84 μ mol/l

Adjusted calcium	2.41mmol/l
Lactate Dehydrogenase	300 IU/l
Albumin	36 g/l
Globulin	52 g/l

An abnormal protein band is detected during analysis and the GP arranges for further review with the Haematologist at the hospital. Further investigations are undertaken:

Monoclonal paraprotein 18g/l

Bone Marrow examination showing 6% plasma cells

Skeletal Survey showing no abnormalities

What is the diagnosis?

	Multiple Myeloma
	Hodgkins Lymphoma
	Waldenström's macroglobulinemia (lymphoplasmacytic lymphoma)
	Asymptomatic Myleoma
	Monoclonal gammopathy on uncertain significance (MGUS)

Dashboard

Overall score: 0%

1 -

□ Question 76 of 110



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	Asymptomatic Myleoma
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Dashboard

Overall score: 0%

1 -

□ Question 77 of 110



A 30-year-old woman is referred to haematology clinic by her GP for assessment for possible hereditary haemochromatosis. The patient reports that her 37-year-old brother has recently been diagnosed with the condition after developing progressive fatigue and joint pains over the previous few months. The patient is very concerned that she too may have inherited the condition, especially as at the time of his diagnosis her brother has been found to have significant damage to his liver and diabetes secondary to iron overload. With her brother's consent, the patient had brought a copy of his medical records to the clinic appointment and details of his investigations are given below.

Aside from the anxiety induced by her brother's recent illness, the patient reported being in generally good health. She reported leading a busy life, working full time as a primary school teacher in addition to raising her 4-year-old daughter. In the context of these commitments and activities, the patient did not feel she was unreasonably tired or lethargic and did not experience significant joint pains.

The patient had a history of psoriasis that was well controlled with topical treatments. The pregnancy and delivery of her daughter had been uncomplicated. The patient reported a tendency to a heavy menstrual flow and had previously been prescribed tranexamic acid for this by her GP although she had not found significant benefit from this treatment. Aside from topical treatments for her psoriasis, the patient took no regular, prescribed medications and had no known allergies to medications.

Physical examination of the patient was unremarkable; in particular, no signs of chronic liver disease were identified on gastrointestinal system examination.

A summary of the patient's brother's investigations for hereditary haemochromatosis at the time of his diagnosis is given below.

Ferritin	1,527 microgram / L (30-300)
Transferrin saturation	78 % (15-45)
HFE gene analysis	homozygous for C282Y mutation
HbA1C	53 mmol / mol (reference < 42)
Liver magnetic resonance imaging	Generalised cirrhosis; low signal seen on all sequences, especially T2 weighted

The patient had undergone basic blood tests arranged by her GP at the time of referral, with results given below.

Haemoglobin	136 g / dL
Mean cell volume	84.1 fl
Ferritin	190 microgram / L (30-300)
Transferrin saturation	43 % / (15-45)

What is the appropriate next investigation to confirm or exclude the patient suffering from hereditary haemochromatosis?

	Pituitary hormone panel
	HFE gene analysis
	Liver magnetic resonance imaging (T2 weighted)
	Patient asymptomatic and normal iron studies, no further investigations indicated
	Liver biopsy

Dashboard

Overall score: 0%

1 -

□ Question 77 of 110



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	Pituitary hormone panel
	HFE gene analysis
	Liver magnetic resonance imaging (T2 weighted)
	Patient asymptomatic and normal iron studies, no further investigations indicated
	Liver biopsy

Dashboard

Overall score: **0%**
1 -

Question 78 of 110

□ □

A 16 year old Singaporean boy is brought in to A&E by mother after feeling generally unwell and feverish for one week. He has no past medical or significant family history. He has not travelled recently. On examination, he complains of a sore lip, where you note significant peeling. He has red eyes bilaterally, swollen feet bilaterally and prominent lymph nodes on the right side of his neck. What is the most appropriate next management step?

	Intravenous immunoglobulin
	Intravenous methylprednisolone
	Intravenous augmentin
	Anti-tuberculous treatment
	Ultrasound guided lymph node biopsy

Dashboard

Overall score: 0%

1 -

□ Question 78 of 110

□ □

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	Intravenous methylprednisolone
	Intravenous augmentin
	Anti-tuberculous treatment
	Ultrasound guided lymph node biopsy

Dashboard

Overall score: **0%**

1 -

□ Question 79 of 110



A 62 year old man had a routine set of blood tests performed by his General Practitioner. These demonstrated an erythrocytosis (Packed Cell Volume 0.56) but no other abnormality. Further questioning by the GP found that the patient had no symptoms of hyperviscosity, was a non-smoker with no symptoms of daytime somnolence and took no regular medications. Past medical history included only a left knee hemiarthroplasty performed due to osteoarthritis.

Two weeks after the initial blood test, the patient's bloods were repeated and showed a persistence of the erythrocytosis. A referral to haematology clinic was made for further investigation. Details of further investigations arranged through haematology clinic are listed below.

Haemoglobin	18.8 g / dL
White cell count	$6.7 \times 10^9/\text{L}$
Neutrophils	$3.2 \times 10^9/\text{L}$
Lymphocytes	$2.1 \times 10^9/\text{L}$
Monocytes	$0.8 \times 10^9/\text{L}$
Eosinophils	$0.3 \times 10^9/\text{L}$
Basophils	$0.3 \times 10^9/\text{L}$
Platelets	$202 \times 10^9/\text{L}$
Packed cell volume	0.59
Urea	4.5 mmol / L
Creatinine	97 micromol / L
Sodium	140 mmol / L
Potassium	3.9 mmol / L
eGFR	85 ml / min
Ferritin	80 ng / ml

Albumin	38 g / L
Alkaline phosphatase	89 U / L
ALT	25 U / L
Bilirubin	20 micromol / L
JAK 2 V617F mutation	Negative
Serum erythropoietin	0 U / L (reference 0-19)

Blood film: no abnormality detected; no features of myeloproliferative disease

Abdominal ultrasound: liver, hepatic duct system and gallbladder unremarkable; mild-moderate splenomegaly; kidneys and renal tract unremarkable

What is the most appropriate next investigation?

<input type="checkbox"/>	JAK2 exon 12 mutation testing
<input type="checkbox"/>	Bone marrow aspiration and trephine biopsy
<input type="checkbox"/>	Measurement of red cell mass
<input type="checkbox"/>	CT brain
<input type="checkbox"/>	Erythropoietin receptor gene analysis

Dashboard

Overall score: **0%**

1 -

□ Question 79 of 110



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	CT brain
	Erythropoietin receptor gene analysis

Dashboard

Overall score: **0%**

1 -

Question 80 of 110



A 23 year old female has presented with her first episode of seizure on the labour ward, 2 days after delivering her first child by normal vaginal delivery. She reports a fluctuating generalised headache over the past 3 months but had not previously sought medical attention. In addition, she had spiked 2 fevers over 38°C over the past 48 hours, with no dysuria, diarrhoea or vomiting, productive cough or signs of meningism. She has no past medical history, is a life-long non-smoker and has been abstinent of alcohol for 9 months, previously drinking 4 units per week. Her seizure was witnessed and described as tonic-clonic jerking of all 4 limbs, associated with loss of consciousness, terminated after 4mg of intravenous lorazepam after 4 minutes. On examination, she appears post-ictal but responding to voice despite being sleepy. Pupils are reactive and equal. Plantars are downgoing bilaterally. Cardiovascular, abdominal and respiratory examinations are unremarkable. No skin rashes, neck stiffness or photophobia are noted. Her blood results are as follows:

Hb	7.5 g/dl
MCV	87 fl
Platelets	23 * 10 ⁹ /l
WBC	9.2 * 10 ⁹ /l
Blood film	schistocytes
Coomb's test	negative
CRP	30 mg/l
Urea	12.6mmol/l
Creatinine	154 µmol/l
Bilirubin	28 µmol/l
ALP	98 u/l
ALT	28 u/l
γGT	23 u/l

A CT head with contrast demonstrated no areas of ischaemia, haemorrhage or space occupying lesion.

Which is the next most appropriate immediate management?

	Plasma exchange
	Intravenous 3rd generation cephalosporin antibiotics
	Intravenous phenytoin loading
	MRI head with contrast
	Intravenous steroids

Dashboard

Overall score: 0%

1 -

Question 80 of 110



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	Intravenous phenytoin loading
	MRI head with contrast
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Dashboard

Overall score: 0%

1 -

□ Question 81 of 110



An 16 year-old presents with a 2 day history of abdominal pain. On questioning, this is a constant ache with no obvious exacerbating or precipitating factors. He is opening his bowels as normal. He is usually well, aside from a cold in the preceding week.

He has an antalgic gait and complains of pain in his left knee. Examination of his left knee is unremarkable. He has bilateral mild periorbital oedema. There is also an extensive purpuric rash, focused around his buttocks and posterior leg. This is non-blanching.

Urinalysis: Blood 3+, Protein 2+

Hb	135 g/l	Na ⁺	135 mmol/l
Platelets	230 * 10 ⁹ /l	K ⁺	3.5 mmol/l
WBC	11 * 10 ⁹ /l	Urea	7 mmol/l
Neuts	9 * 10 ⁹ /l	Creatinine	85 µmol/l

What is the most likely diagnosis?

	Intussusception
	Henoch-Schonlein purpura
	Idiopathic thrombocytopenic purpura
	Glomerulonephritis
	Bacterial meningitis

Overall score: **0%**

1 -

Question 81 of 110



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	Henoch-Schonlein purpura
	Idiopathic thrombocytopenic purpura
	Glomerulonephritis
	Bacterial meningitis

Overall score: **0%**

1 -

□ Question 82 of 110



A 52-year-old male was seen in the rapid access Transient Ischaemic Attack (TIA) clinic. He presented to his GP with new onset left leg and arm weakness three days ago. The weakness lasted for 90 minutes and fully resolved with no residual defect. He had a past medical history of hypertension, obstructive sleep apnoea and a left sided deep vein thrombosis eight years ago. His medication comprised ramipril 5mg OD. He smoked ten cigarettes per day and did not drink alcohol.

On examination, he had obvious truncal obesity and a flushed complexion. Blood pressure was 128/82 mmHg, heart rate 78/min, respiratory rate 16/min and oxygen saturations 99% on air. Cardiovascular examination revealed a regular pulse and nil else of note. Respiratory and gastrointestinal examination were normal, though examination of the abdomen was somewhat limited by the presence of truncal obesity. Neurological examination was unremarkable with normal cranial nerve, fundoscopy and peripheral neurological examinations.

Initial investigations revealed the following results:

Hb	191 g/l
MCV	98 fl
Hct	0.523
Platelets	$502 \times 10^9/l$
WBC	$14.0 \times 10^9/l$
Neutrophils	86%
Lymphocytes	10%
Monocytes	4%

HbA1c	43 mmol/mol
Fasting cholesterol	5.6 mmol/l

ECG: 76bpm normal sinus rhythm no other abnormality

Chest x-ray: unremarkable
24 hr ECG: no arrhythmia seen
Echo: normal systolic function, mild aortic stenosis with pressure gradient of 42mmHg
CT head: normal intracranial appearances, no evidence of mass shift, space occupying lesion or haemorrhage

What is the most appropriate next investigation most likely to lead to the underlying diagnosis?

	Cardiac catheterization
	Testing for presence of JAK2 mutation
	Bone marrow biopsy
	Radioisotope scanning of circulating blood volumes
	MRI scanning of the abdomen

Dashboard

Overall score: 0%

1 -

□ Question 82 of 110



A 52-year-old male was seen in the rapid access Transient Ischaemic Attack (TIA) clinic. He presented to his GP with new onset left leg and arm weakness three days ago. The weakness lasted for 90 minutes and fully resolved with no residual defect. He had a past medical history of hypertension, obstructive sleep apnoea and a left sided deep vein thrombosis eight years ago. His medication comprised ramipril 5mg OD. He smoked ten cigarettes per day and did not drink alcohol.

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What is the most appropriate next investigation most likely to lead to the underlying diagnosis?

	Cardiac catheterization
	Testing for presence of JAK2 mutation
	Bone marrow biopsy
	Radioisotope scanning of circulating blood volumes
	MRI scanning of the abdomen

Dashboard

Overall score: 0%

1 -

Question 83 of 110

□ □

A 60 year old female with known chronic lymphocytic leukaemia (CLL) presents with coryzal symptoms. Examination findings are unremarkable. Her blood tests are as follows:

	8 months previously	Two months previously	Today
Haemoglobin	113 g/l	108 g/l	106 g/l
White cell count	$32.0 \times 10^9/l$	$50.0 \times 10^9/l$	$58.0 \times 10^9/l$
Neutrophils	$7.0 \times 10^9/l$	$4.8 \times 10^9/l$	$4.0 \times 10^9/l$
Lymphocytes	$25.0 \times 10^9/l$	$45.0 \times 10^9/l$	$54.0 \times 10^9/l$
Platelets	$358 \times 10^9/l$	$280 \times 10^9/l$	$268 \times 10^9/l$

What is the most appropriate treatment option?

	Chlorambucil
	Fludarabine and chlorambucil
	Observation
	Prednisolone
	Fludarabine

Dashboard

Overall score: 0%

1 -

□ Question 83 of 110

□ □

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Platelets	$358 \times 10^9/l$	$280 \times 10^9/l$	$268 \times 10^9/l$

What is the most appropriate treatment option?

	Chlorambucil
	Fludarabine and chlorambucil
	Observation
	Prednisolone
	Fludarabine

Dashboard

Overall score: 0%

1 -

Question 84 of 110

□ □

A 62-year-old woman presents to the haematology clinic. She has had lower back pain, which has been progressive in nature. She has also been noted to develop unexplained anaemia. Her initial protein electrophoresis and serum-free light chain assays raised suspicion of multiple myeloma. She has a past medical history of transient ischaemic attacks and hypertension. She takes clopidogrel, amlodipine and ramipril. What imaging should be offered to further assess her?

	Lumbosacral X-rays
	Skeletal survey
	Whole body CT
	Whole body MRI
	PET scan

Dashboard

Overall score: 0%

1 -

Question 84 of 110

□ □

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	Lumbosacral X-rays
	Skeletal survey
	Whole body CT
	Whole body MRI
	PET scan

Dashboard

Overall score: **0%**

1 -

Question 85 of 110



A 30-year-old previously fit and well gentleman is injured following a road traffic accident after being thrown off his motorcycle. He was blue-lighted to the emergency department, where he was found to have multiple, profusely bleeding, lacerations of his extremities.

He was transfused 2 units of cross-matched blood, with no reactions detected in blood bank. Ten minutes after the transfusion, the patient developed severe urticaria.

Which of the following syndromes would contribute to the patient's picture?

	Adenosine deaminase deficiency
	Ataxia telangiectasia
	DiGeorge syndrome
	Selective IgA deficiency
	Wiskott-Aldrich syndrome

Dashboard

Overall score: 0%

1 -

Question 85 of 110

□ □

A 30-year-old previously fit and well gentleman is injured following a road traffic accident after being thrown off his motorcycle. He was blue-lighted to the emergency department, where he was found to have multiple, profusely bleeding, lacerations of his extremities.

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	Ataxia telangiectasia
	DiGeorge syndrome
	Selective IgA deficiency
	Wiskott-Aldrich syndrome

Dashboard

Overall score: **0%**

1 -

□ Question 86 of 110



An 83 year old female presents with increased right calf swelling, erythema and tenderness four days after an initial admission for community acquired pneumonia. Her past medical history includes hypertension, type 2 diabetes mellitus and a previous right total knee replacement 10 years ago. She is currently on oral antibiotics and an ultrasound Doppler demonstrates a right calf deep vein thrombus. She is subsequently started on low molecular weight heparin for 6 months as per guidelines for a provoked deep vein thrombosis.

Three days afterwards, an increase in ALT and GGT prompts a CT abdomen, demonstrating an ischaemic injury to the liver on triple phase imaging. A further two days after her DVT, the patient awaits admission to a rehabilitation ward prior to her discharge back to her own home. Her blood tests are as follows:

Hb	11.1 g/dl
MCV	87 fl
Platelets	$28 \times 10^9/l$
WBC	$13.2 (21) \times 10^9/l$
Neuts	$11.2 (17) \times 10^9/l$
INR	1.1
APTT	95s
CRP	30 (185) mg/l

What is the optimal management?

	Stop low molecular weight heparin
	Stop low molecular weight heparin, start dabigatran
	Stop low molecular weight heparin, start warfarin

	Continue low molecular heparin
	One pool platelet transfusion

Dashboard

Overall score: **0%**

1 -

Question 86 of 110



An 83 year old female presents with increased right calf swelling, erythema and tenderness four days after an initial admission for community acquired pneumonia. Her past medical history includes hypertension, type 2 diabetes mellitus and a previous right total knee replacement 10 years ago. She is currently on oral antibiotics and an ultrasound Doppler demonstrates a right calf deep vein thrombus. She is subsequently started on low molecular weight heparin for 6 months as per guidelines for a provoked deep vein thrombosis.

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APTT	95s
CRP	30 (185) mg/l

What is the optimal management?

	Stop low molecular weight heparin
	Stop low molecular weight heparin, start dabigatran
	Stop low molecular weight heparin, start warfarin

	Continue low molecular heparin
	One pool platelet transfusion

Dashboard

Overall score: **0%**
1 -

Question 87 of 110

□ □

A 25 year-old woman with ataxia telangiectasia undergoes open biopsy of an enlarged cervical lymph node. Microscopic examination reveals changes consistent with nodular sclerosing Hodgkins disease. Unfortunately, she develops spreading cellulitis around the biopsy site which fails to respond to intravenous antibiotics and ultimately requires surgical debridement.

What is the most common reason for the increased susceptibility to infections in ataxia telangiectasia?

<input type="checkbox"/>	Hypogammaglobulinaemia
<input type="checkbox"/>	Neutropaenia
<input type="checkbox"/>	Hyposplenism
<input type="checkbox"/>	Defect in phagocyte NADPH oxidase
<input type="checkbox"/>	Complement deficiency

Dashboard

Overall score: 0%

1 -

□ Question 87 of 110

□ □

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	Neutropaenia
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	Defect in phagocyte NADPH oxidase
	Complement deficiency

Dashboard

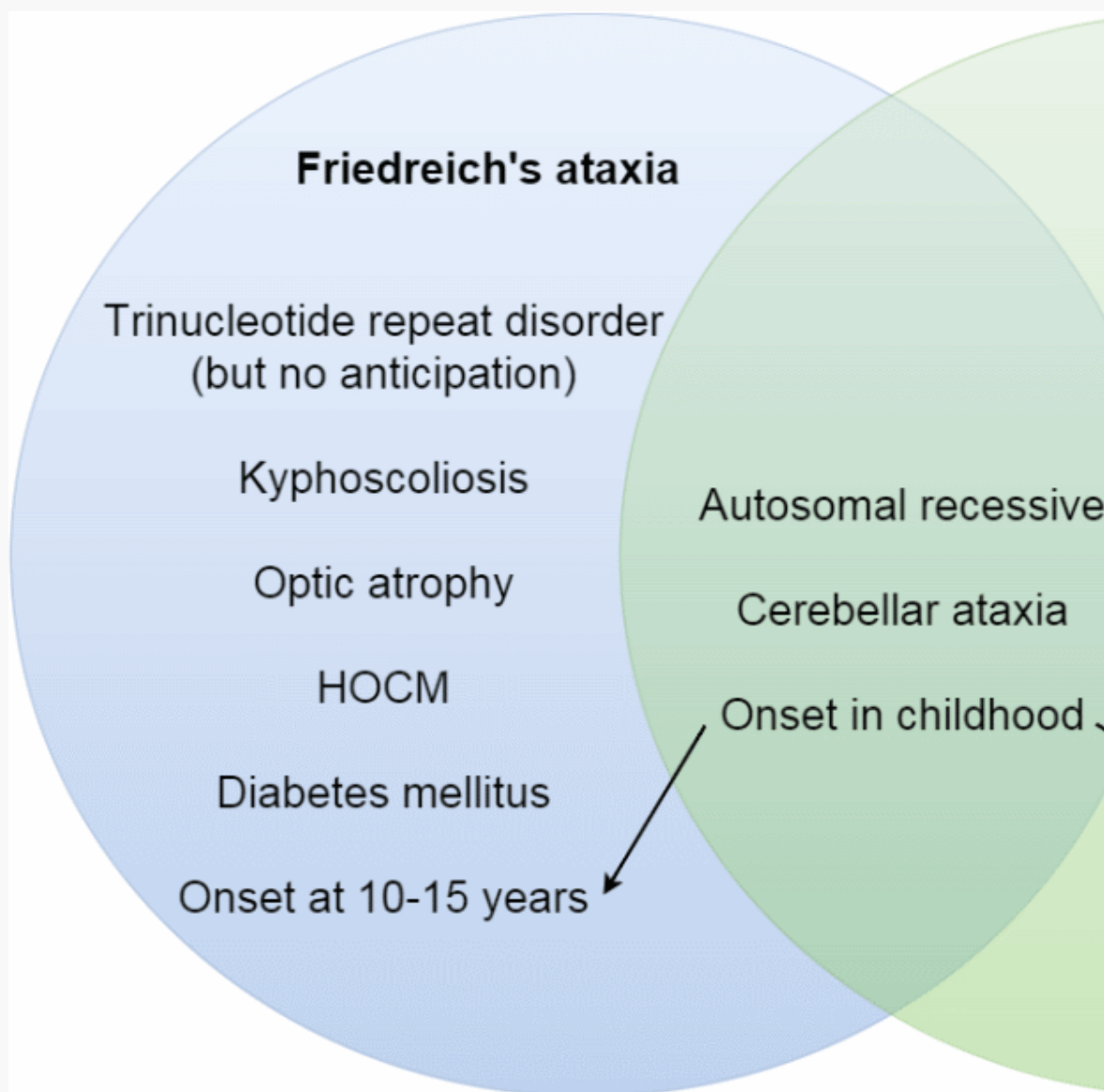
Overall score: **0%****1** -

Question 87 of 110

A 25 year-old woman with a long history of recurrent spreading cellulitis around the site of surgical debridement.

What is the most common risk factor for this condition?

<input type="checkbox"/>	Hypogammaglobulinaemia
<input type="checkbox"/>	Neutropaenia
<input type="checkbox"/>	Hyposplenism
<input type="checkbox"/>	Defect in phagocytosis
<input type="checkbox"/>	Complement deficiency



Dashboard

Overall score: 0%

1 -

□ Question 88 of 110



A 65-year-old man is seen in the haematology clinic for review of test results. He has been fatigued for the last three months and has experienced night sweats. On examination he is pale with a palpable spleen 4cm below the costal margin, mildly tender on palpation. His only other past medical history is of osteoarthritis.

His results are as follows:

Hb	89 g/l	Na ⁺	140 mmol/l
Platelets	205 * 10 ⁹ /l	K ⁺	4.0 mmol/l
WBC	5 * 10 ⁹ /l	Urea	5.8 mmol/l
Neuts	3.6 * 10 ⁹ /l	Creatinine	72 µmol/l
Lymphs	1.2 * 10 ⁹ /l	CRP	3 mg/l

Blood film: Anisocytosis with mild hypochromia. Tear drop cells.

CT chest/abdomen/pelvis: Splenic enlargement. No suspicious mass lesions seen. 1cm simple right renal cyst. No lymphadenopathy.

Bone marrow biopsy: Fibrosis

Which initial therapy should be used to treat this gentleman?

	Chlorambucil
	Fludarabine
	Hydroxycarbamide
	Interferon alpha
	Lenalidomide

Dashboard

Overall score: **0%**

1 -

Question 88 of 110



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Dashboard

Overall score: **0%**

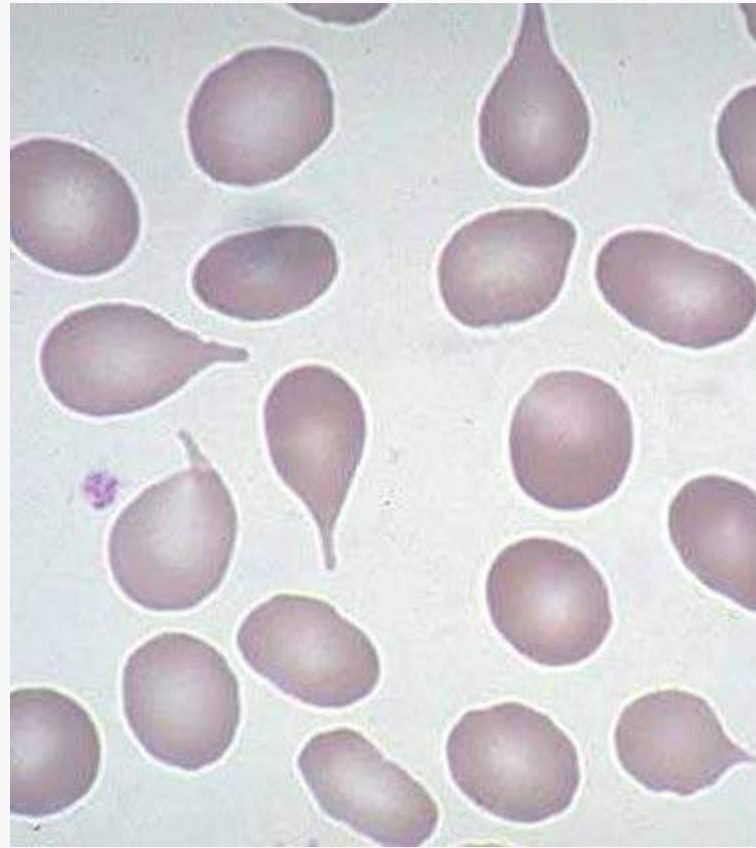
1 -

Question 88 of 110

A 65-year-old man is seen in the haematology clinic for review 6 months and has experienced night sweats. On examination he has a 1cm splenic enlargement, mildly tender on palpation. His only other past medical history is hypertension.

His results are as follows:

Hb	89 g/l	Na ⁺	140 mmol/l
Platelets	205 * 10 ⁹ /l	K ⁺	4.0 mmol/l
WBC	5 * 10 ⁹ /l	Urea	5.8 mmol/l
Neuts	3.6 * 10 ⁹ /l	Creatinine	72 µmol/l
Lymphs	1.2 * 10 ⁹ /l	CRP	3 mg/l



Blood film: Anisocytosis with mild hypochromia. Tear drop cells.

CT chest/abdomen/pelvis: Splenic enlargement. No suspicious mass lesions seen. 1cm simple right renal cyst. No lymphadenopathy.

Bone marrow biopsy: Fibrosis

Which initial therapy should be used to treat this gentleman?

<input type="radio"/>	Chlorambucil
<input type="radio"/>	Fludarabine
<input checked="" type="radio"/>	Hydroxycarbamide
<input type="radio"/>	Interferon alpha
<input type="radio"/>	Lenalidomide

Dashboard

Overall score: **0%**

1 -

□ Question 89 of 110

□ □

A 72-year-old woman presents to the emergency department following a fall. On examination, her right leg is shortened and externally rotated and she is unable to weight bear. A hip X-ray demonstrates a fractured neck of femur which appears pathological. She has no history of cancer. Following a dynamic hip screw insertion, she recovers well. She has blood tests sent for FBC, U&E, LDH, calcium, albumin, uric acid, serum electrophoresis, immunoglobulins and ESR. She has had a chest X-ray which was normal.

What additional tests should be requested to complete the initial investigations of the pathological nature of the fracture?

	MRI whole spine
	MRI hip
	Urinary electrophoresis
	Trephine biopsy
	Bone marrow biopsy

Dashboard

Overall score: 0%

1 -

□ Question 89 of 110

□ □

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What additional tests should be requested to complete the initial investigations of the pathological nature of the fracture?

	MRI whole spine
	MRI hip
	Urinary electrophoresis
	Trephine biopsy
	Bone marrow biopsy

Dashboard

Overall score: **0%****1** -

Question 90 of 110



A 50 year old woman was referred to haematology clinic for management of a persistent erythrocytosis that had been monitored by her General Practitioner over the previous 6 months. The patient was asymptomatic and in particular reported no headaches or visual changes. Past medical history was remarkable only for internal fixation of a tibial fracture sustained in a car accident 5 years previously. There is no strong family history of venous thrombosis or ischaemic heart disease. The patient took no regular medications and worked as an accountant. She is a life-long non-smoker and drinks approximately 10 units of alcohol per week.

Following assessment at haematology, further investigations were requested as listed below.

Hb	# g/dl
Platelets	# * 10 ⁹ /l
WBC	# * 10 ⁹ /l

Haemoglobin	18.7 g / dL
White cell count	6.1 * 10 ⁹ /l
Neutrophils	3.5 * 10 ⁹ /l
Lymphocytes	1.0 * 10 ⁹ /l
Monocytes	0.7 * 10 ⁹ /l
Eosinophils	0.4 * 10 ⁹ /l
Basophils	0.5 * 10 ⁹ /l
Platelets	276 * 10 ⁹ /l
Packed cell volume	0.57
Urea	4.5 mmol / L
Creatinine	95 micromol / L
Sodium	142 mmol / L

Potassium	4.5 mmol / L
Ferritin	56 ng / mL
Albumin	35 g / L
Alkaline phosphatase	80 U / L
ALT	20 U / L
Bilirubin	18 micromol / L
JAK 2 V617F mutation	Positive
Serum erythropoietin	3 U / L (reference 0-19)

Blood film: no abnormality detected

Abdominal ultrasound: liver, hepatic duct system and gallbladder unremarkable; mild-moderate splenomegaly; kidneys and renal tract unremarkable

What is the appropriate management for the patient's erythrocytosis?

	Aspirin and venesection with target PCV < 0.45
	Aspirin and venesection with target PCV 0.45-0.50
	Aspirin
	Venesection with target PCV 0.45-0.50
	Hydroxyurea

Dashboard

Overall score: **0%**

1 -

Question 90 of 110



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Blood film: no abnormality detected

Abdominal ultrasound: liver, hepatic duct system and gallbladder unremarkable; mild-moderate splenomegaly; kidneys and renal tract unremarkable

What is the appropriate management for the patient's erythrocytosis?

	Aspirin and venesection with target PCV < 0.45
	Aspirin and venesection with target PCV 0.45-0.50
	Aspirin
	Venesection with target PCV 0.45-0.50
	Hydroxyurea

Dashboard

Overall score: **0%**

1 -

Question 91 of 110

□ □

You receive a phone call requesting advice from a GP. A patient who is on long term warfarin for atrial fibrillation has been found to have an INR of 10.0 following a recent course of antibiotics. She is not bleeding and only has long standing senile purpura on her arms with no new bruising. What is the most appropriate advice to give?

	Admit for intravenous vitamin K and monitoring
	Give oral vitamin K and continue warfarin at usual dose
	Give oral vitamin K and stop warfarin until INR < 5
	Give oral vitamin K and stop warfarin until INR < 3
	Stop warfarin and restart when INR < 3

Dashboard

Overall score: 0%

1 -

□ Question 91 of 110

□ □

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	Give oral vitamin K and stop warfarin until INR < 3
	Stop warfarin and restart when INR < 3

Dashboard

Overall score: **0%**

1 -

Question 92 of 110

□ □

A 72-year-old lady who has a background of multiple myeloma is being investigated for bilateral carpal tunnel syndrome, worsening shortness of breath and oedema. Her investigation results are as follows:

Hb	105 g/l
Platelets	$145 \times 10^9/l$
WBC	$7.2 \times 10^9/l$

Ca ⁺	2.70 mmol/l
Urea	4.3 mmol/l
Creatinine	150 μ mol/l

Urine protein >3.5/day

Chest x-ray shows cardiomegaly with fluid overload

What are her symptoms most likely to be due to?

	Membranous nephropathy
	Amyloidosis
	Heart failure
	Minimal change disease
	Treatment side effects

Overall score: **0%**

1 -

Question 92 of 110



A 72-year-old lady who has a background of multiple myeloma is being investigated for bilateral carpal tunnel syndrome, worsening shortness of breath and oedema. Her investigation results are as follows:

Hb	105 g/l
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	Heart failure
	Minimal change disease
	Treatment side effects

Overall score: **0%**

1 -

Question 92 of 110

A 72-year-old lady who has a background of m...
worsening shortness of breath and oedema. He...

Hb	105 g/l
Platelets	145 * 10 ⁹ /l
WBC	7.2 * 10 ⁹ /l

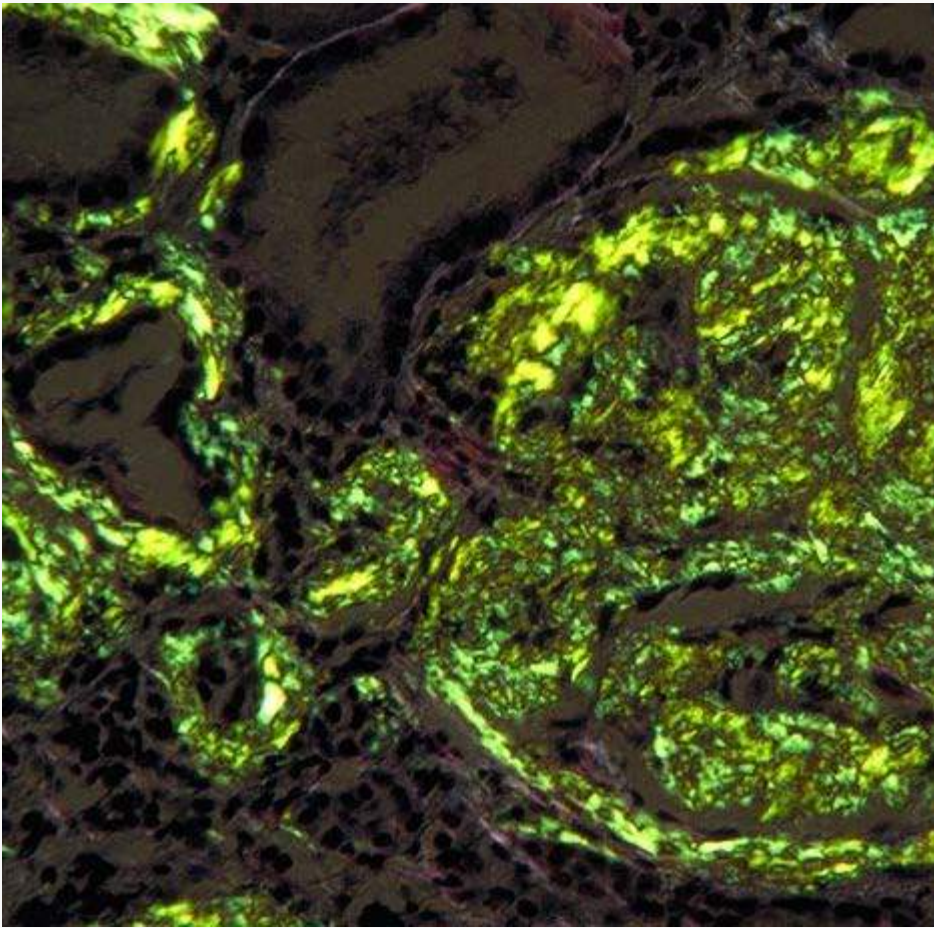
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	Membranous nephropathy
	Amyloidosis
	Heart failure
	Minimal change disease
	Treatment side effects



Overall score: **0%**

1 -

Question 92 of 110

A 72-year-old lady who has a background of membranous nephropathy with worsening shortness of breath and oedema. Her

Hb	105 g/l
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WBC	$7.2 \times 10^9/l$

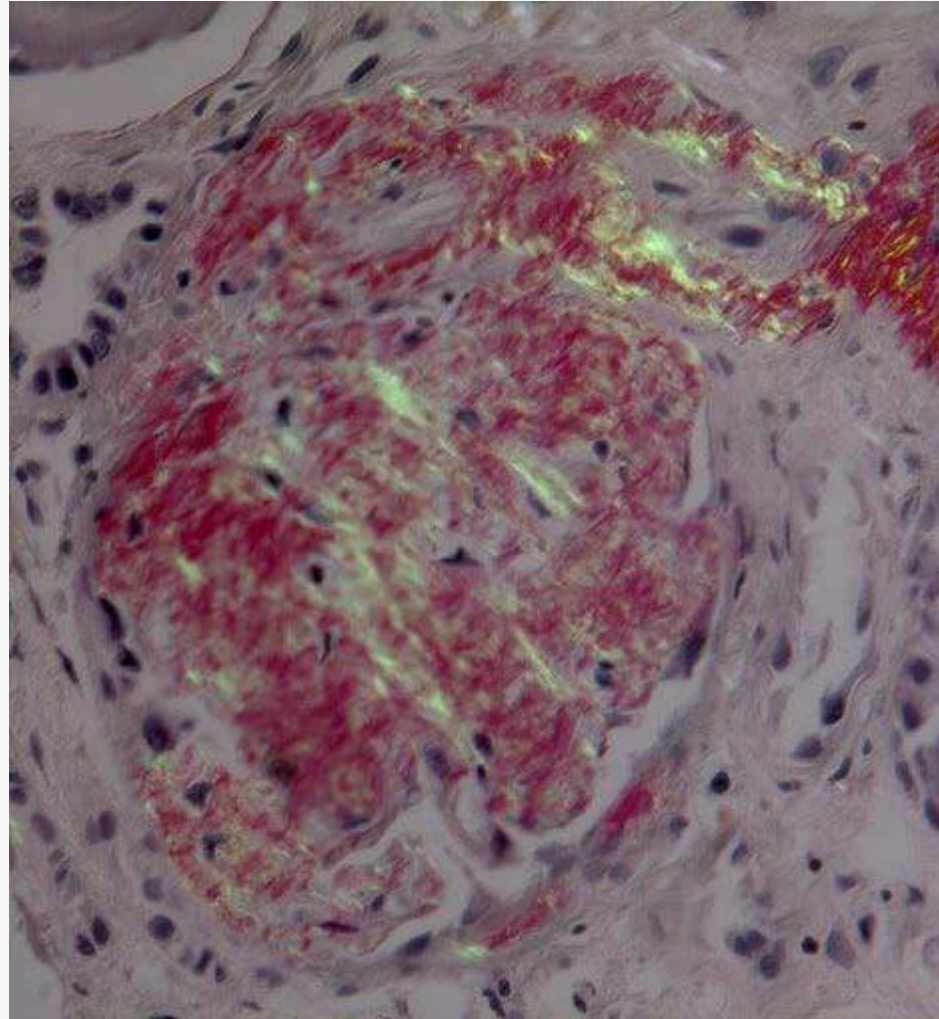
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What are her symptoms most likely to be due to?

<input type="checkbox"/>	Membranous nephropathy
<input checked="" type="checkbox"/>	Amyloidosis
<input type="checkbox"/>	Heart failure
<input type="checkbox"/>	Minimal change disease
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Overall score: **0%**

1 -

Question 92 of 110

A 72-year-old lady who has a background of m...
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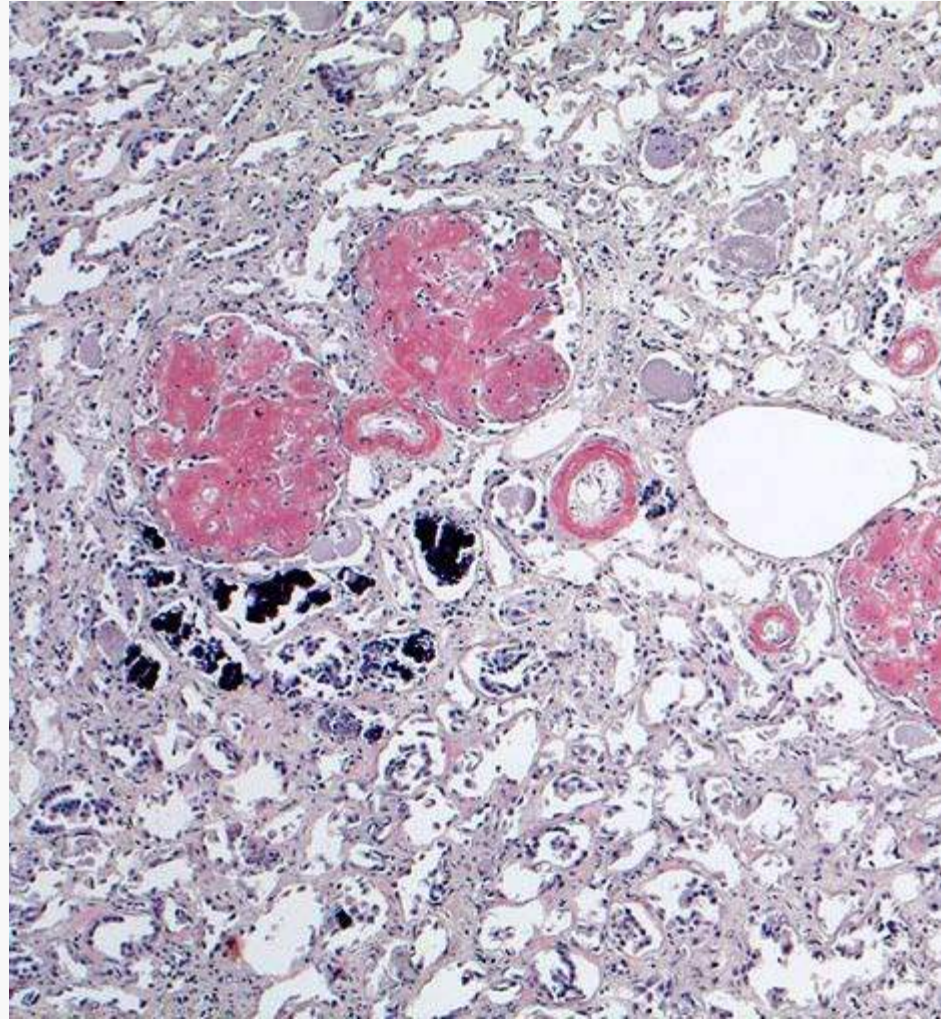
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Creatinine	150 μ mol/l

Urine protein >3.5/day

Chest x-ray shows cardiomegaly with fluid overload

What are her symptoms most likely to be due to?

	Membranous nephropathy
	Amyloidosis
	Heart failure
	Minimal change disease
	Treatment side effects



Overall score: **0%**

1 -

□ Question 93 of 110

□ □

A 61-year-old woman comes for review. Around one year ago she finished a 6 month course of warfarin after being diagnosed with an unprovoked, proximal deep vein thrombosis. For the past few weeks she has been experiencing 'heaviness' and 'aching' in the the same leg. This is associated with an itch and some swelling, although this seems to go down each night. Past medical history of note includes osteoarthritis and type 2 diabetes mellitus.

On examination prominent varicose veins are seen on the affected leg with some brown discolouration of the skin above the medial malleolus. There is no difference in the circumference of the calves. Her temperature is 36.9°C, pulse 78/min and blood pressure 108/82 mmHg. What is the most likely diagnosis?

	Recurrence of deep vein thrombosis
	Post-thrombotic syndrome
	Cellulitis
	Ruptured Baker's cyst
	Necrobiosis lipoidica

Dashboard

Overall score: 0%

1 -

Question 93 of 110

□ □

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	Recurrence of deep vein thrombosis
	Post-thrombotic syndrome
	Cellulitis
	Ruptured Baker's cyst
	Necrobiosis lipoidica

Dashboard

Overall score: 0%

1 -

Question 94 of 110

□ □

A 29-year-old man who is known to be HIV positive is reviewed. He has been taking anti-retroviral therapy for the past 2 years and has remained relatively well. Over the past few weeks however he has developed abdominal distension with some discomfort in the right iliac fossa. On examination a mass can be felt in the right lower quadrant. A biopsy shows a B cell lymphoma. Sheets of a medium sized lymphoid cells with high proliferative activity, forming a 'starry sky' appearance, are noted. What cytogenic abnormality is most likely to be found?

	t(11;14)
	t(14;18)
	t(8;14)
	t(9;22)
	t(11;18)

Dashboard

Overall score: 0%

1 -

□ Question 94 of 110

□ □

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	t(14;18)
	t(8;14)
	t(9;22)
	t(11;18)

Dashboard

Overall score: **0%****1** -

□ Question 95 of 110

□ □

A 21-year-old girl complains of easy bruising. She has menorrhagia for which she is being investigated by the gynaecology team. She takes no regular medications. Her father had prolonged bleeding after a tooth extraction.

Blood tests show:

Hb	110 g/L
MCV	74 fL
WBC	$4.2 \times 10^9/\text{L}$
Platelets	$135 \times 10^9/\text{L}$
APTT	1.4
INR	1.0

What is the most likely diagnosis?

	Haemophilia B
	Anti-thrombin III deficiency
	Von Willebrand's disease
	Immune thrombocytopenia
	Haemophilia A carrier

Overall score: **0%**

1 -

Question 95 of 110

□ □

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	Von Willebrand's disease
	Immune thrombocytopenia
	Haemophilia A carrier

Dashboard

Overall score: **0%**

1 -

Question 96 of 110

A 46-year-old female patient of yours is seen in the outpatient family practice clinic, and is found to have a platelet count of $800 \times 10^3/\text{microliter}$ on routine testing of her full blood count. After a specialist review, she is diagnosed with essential thrombocythaemia after discovering she is JAK2 positive. She is asymptomatic has no history of arterial or venous thromboses. What is the next step in management?

<input type="checkbox"/>	Hydroxyurea
<input type="checkbox"/>	Aspirin
<input type="checkbox"/>	No management required
<input type="checkbox"/>	Prophylactic enoxaparin
<input type="checkbox"/>	Platelet pheresis

Dashboard

Overall score: 0%

1 -

Question 96 of 110

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	Hydroxyurea
	Aspirin
	No management required
	Prophylactic enoxaparin
	Platelet pheresis

Dashboard

Overall score: **0%**

1 -

Question 97 of 110

□ □

A 68-year-old female, presents with lethargy and anorexia. She underwent a partial gastrectomy 3 years ago for bleeding gastric ulcer. Her blood results showed:

Hb	90 g/l
MCV	109 fL
Platelets	60 * 10 ⁹ /l
WBC	3.5 * 10 ⁹ /l
Blood film	Oval erythrocytes, macrocytic erythrocytes, hypersegmented neutrophils, low platelets and basophilic stippling

What is the underlying diagnosis?

<input type="checkbox"/>	Sideroblast anaemia
<input type="checkbox"/>	Spur cell haemolysis
<input type="checkbox"/>	Vitamin-B12 deficiency
<input type="checkbox"/>	Thalassaemia
<input type="checkbox"/>	Myelodysplasia

Dashboard

Overall score: 0%

1 -

□ Question 97 of 110

□ □

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What is the underlying diagnosis?

	Sideroblast anaemia
	Spur cell haemolysis
	Vitamin-B12 deficiency
	Thalassaemia
	Myelodysplasia

Dashboard

Overall score: **0%****1** -

Question 98 of 110

□ □

A 19-year-old man is referred to see you as he has been suffering from recurrent epistaxis and he tells you that if he accidentally injures himself the wound bleeds for a long time.

Initial blood tests are as follows:

Hb	101 g/l
MCV	79 fl
Platelets	$298 \times 10^9/l$
WBC	$9.2 \times 10^9/l$
Bleeding time	Prolonged
PT	14 seconds
APTT	28 seconds
LDH	290 u/l (240 - 480 u/L)
Factor VIIIc	low
Ristocetin platelet aggregation test	Impaired aggregation

What is the single most likely diagnosis?

	Haemophilia A
	Haemophilia B
	Haemophilia C
	Idiopathic Thrombocytopenic Purpura (ITP)
	von Willebrand's disease

Dashboard

Overall score: **0%**

1 -

Question 98 of 110

□ □

A 19-year-old man is referred to see you as he has been suffering from recurrent epistaxis and he tells you that if he accidentally injures himself the wound bleeds for a long time.

Initial blood tests are as follows:

Hb	101 g/l
MCV	79 fl
Platelets	$298 \times 10^9/l$
WBC	$9.2 \times 10^9/l$
Bleeding time	Prolonged
PT	14 seconds
APTT	28 seconds
LDH	290 u/l (240 - 480 u/L)
Factor VIIIc	low
Ristocetin platelet aggregation test	Impaired aggregation

What is the single most likely diagnosis?

	Haemophilia A
	Haemophilia B
	Haemophilia C
	Idiopathic Thrombocytopenic Purpura (ITP)
	von Willebrand's disease

Dashboard

Overall score: **0%**

1 -

□ Question 99 of 110



A 47-year-old lady presented with shortness of breath and a nosebleed. She had been experiencing heavy nosebleeds over the past fifteen years and had twice required cauterization. On this admission she felt very tired, with shortness of breath and chest pain on minimal exertion.

Aside from nosebleeds she had a past medical history of hypertension and hypothyroidism. She had recently consulted a cosmetic surgeon privately as she had spider veins over her lips which she wished to have removed.

She lived with her husband who had been diagnosed with multiple sclerosis and her 18-year-old son who had learning difficulties and epilepsy. She reported that her mother and sister also experienced frequent nosebleeds.

On examination there was conjunctival pallor. The lung fields were clear on auscultation and both heart sounds were present with a systolic murmur audible over the aortic region. The abdomen was soft and non-tender with no palpable masses or organomegaly. On inspection of the skin there was a bruise in the left antecubital fossa and no rashes.

What is the most likely unifying diagnosis?

	Von Willebrand disease
	Wegeners granulomatosis
	Von Hippel Lindau disease
	Idiopathic Thrombocytopaenic Purpura
	Hereditary haemorrhagic telangiectasia

Dashboard

Overall score: 0%

1 -

Question 99 of 110



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<input type="radio"/>	Von Hippel Lindau disease
<input type="radio"/>	Idiopathic Thrombocytopaenic Purpura
<input checked="" type="radio"/>	Hereditary haemorrhagic telangiectasia

Dashboard

Overall score: **0%**

1 -

□ Question 100 of 110

□ □

A 28-year-old man is admitted to the Medical Admissions Unit with a 2-day history of itching, right upper quadrant pain, and abdominal distension. The pain started as a dull ache but became constant and severe over the course of several hours.

His past medical history is remarkable only for a left lower limb DVT diagnosed at age 20. He takes no regular medications and he is a non-smoker. He drinks 2-3 units of alcohol per week and denies intravenous drug use.

Examination reveals a jaundiced young man with pale conjunctivae. He appears deeply uncomfortable. His abdomen is moderately distended with marked right upper quadrant tenderness. His liver and spleen are both palpable 2cm below the costal margin. Shifting dullness is demonstrable on percussion of the abdomen.

His blood results are as follows:

Hb	101 g/l	Na ⁺	139 mmol/l	Bilirubin	109 µmol/l
MCV	102.4 fl	K ⁺	4.2 mmol/l	ALP	284 u/l
Platelets	63 * 10 ⁹ /l	Urea	6.7 mmol/l	ALT	684 u/l
WBC	12.9 * 10 ⁹ /l	Creatinine	108 µmol/l	γGT	179 u/l
Neuts	10.8 * 10 ⁹ /l			Albumin	27 g/l
Lymphs	0.9 * 10 ⁹ /l			LDH	759 u/l

His abdominal ultrasound scan is consistent with hepatic vein thrombosis and the patient is started on low molecular weight heparin. Following a review by the Haematologists, a diagnosis of paroxysmal nocturnal haemoglobinuria is made and the patient is advised to start treatment with eculizumab.

Given the proposed treatment strategy, which of the following vaccinations should the patient be offered?

	Hepatitis B
	Neisseria meningitidis

	Varicella zoster virus
	Streptococcus pneumoniae
	Haemophilus influenzae type b

Dashboard

Overall score: **0%**

1 -

□ Question 100 of 110

□ □

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	Varicella zoster virus
	Streptococcus pneumoniae
	Haemophilus influenzae type b

Dashboard

Overall score: **0%**
1 -

Question 101 of 110

A 24 year old man undergoing his second cycle of ABVD (Doxorubicin, Bleomycin, Vinblastine, Dacarbazine) chemotherapy for Hodgkin lymphoma feels tired and short of breath on exertion. His temperature is 36.5°C and he reports no bleeding.

Bloods show:

Hb	69 g/L
WCC	$1 \times 10^9 /L$
Neutrophils	$0.7 \times 10^9 /L$
Platelets	$19 \times 10^9 /L$

What is the most appropriate treatment?

<input type="checkbox"/>	CMV negative blood
<input type="checkbox"/>	Phenotyped blood
<input type="checkbox"/>	Irradiated blood
<input type="checkbox"/>	CMV negative and irradiated blood
<input type="checkbox"/>	Leucodepleted blood

Dashboard

Overall score: **0%**

1 -

Question 101 of 110

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<input checked="" type="checkbox"/>	Irradiated blood
<input type="checkbox"/>	CMV negative and irradiated blood
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Dashboard

Overall score: **0%**

1 -

Question 102 of 110

□ □

A 54-year-old alcoholic man with chronic hepatitis C is taken to the emergency department by the police. There it was noted that the man had blisters and crusted lesions on his face and lower arms.

Laboratory tests showed elevated plasma porphyrins and elevated uroporphyrin I in the urine, and isocoproporphyrin in the faeces. Biopsy of the skin lesion showed subepidermal blisters with minimal inflammation, marked solar elastosis, thickening of the vessel wall in the papillary dermis and 'caterpillar bodies' in the roof of the blister.

Which of the following is the most likely diagnosis?

	Acute intermittent porphyria
	Delta-aminolevulinic acid dehydrase deficiency
	Erythropoietic protoporphyria
	Hereditary coproporphyria
	Porphyria cutanea tarda

Dashboard

Overall score: 0%

1 -

Question 102 of 110

□ □

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Dashboard

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1 -

Question 102 of 110

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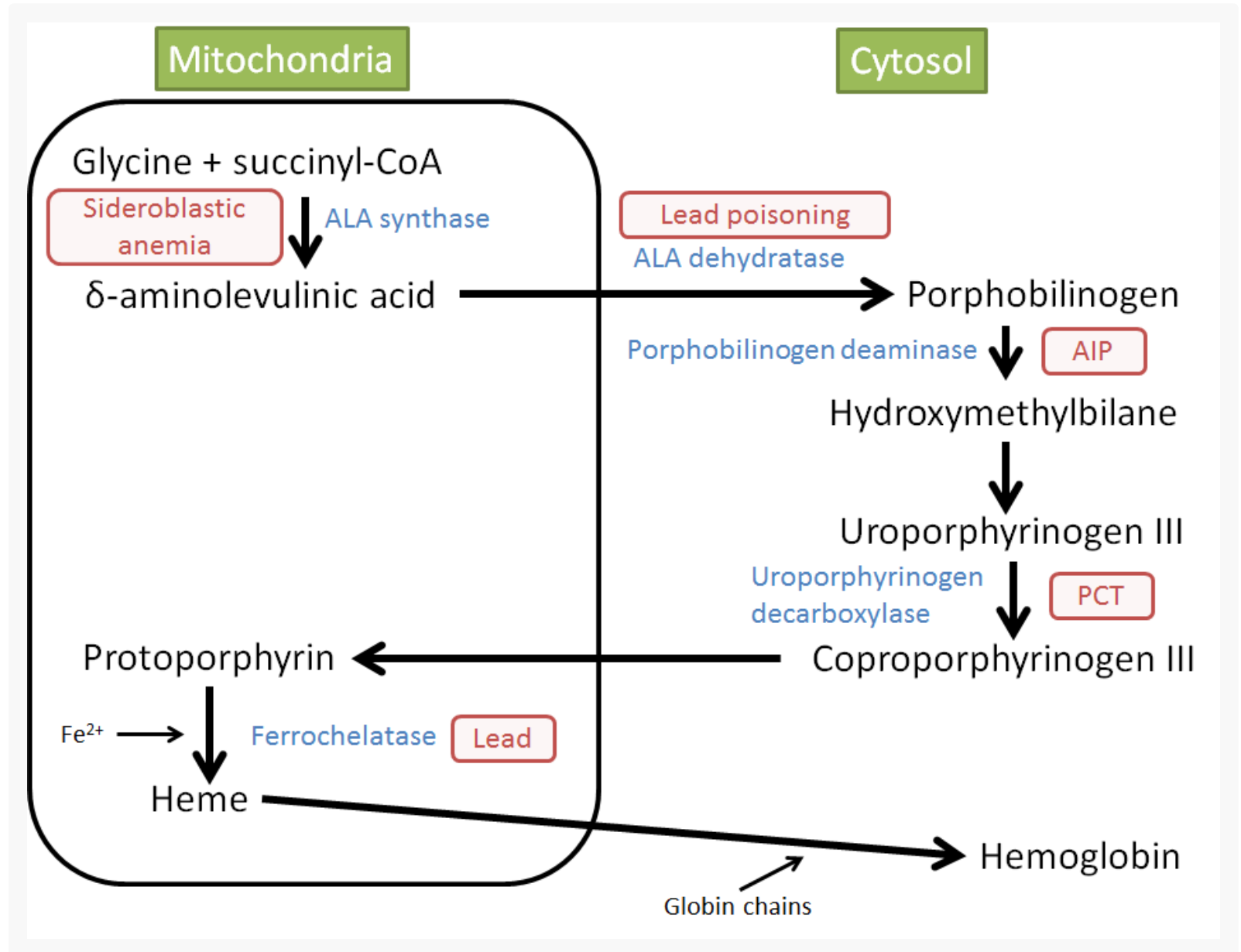
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Dashboard

Overall score: 0%

1 -



Question 103 of 110

□ □

A 62-year-old gentleman with a background of Rheumatoid Arthritis, on maintenance sulfasalazine, is referred to the medical take from his GP with severe unremitting flu-like symptoms and deranged blood tests.

On examination, his temperature is 38.3 degrees celsius, heart rate 104bpm, respiratory rate 31/min and oxygen saturations 92% on room air.

His blood test reveals the following:

Hb	82 g/l
Platelets	$52 \times 10^9/l$
WBC	$18 \times 10^9/l$
Ferritin	50,000ng/ml
EBV Monospot test +ve	

He is initially treated as neutropaenic sepsis, with broad spectrum antimicrobials, and transferred to the intensive care unit for organ support. Unfortunately, he does not make any improvement. He is then seen by haematology who organise a bone marrow aspirate, revealing haemophagocytosis. What is the most likely underlying diagnosis?

	Macrophage activation syndrome
	Drug-induced pancytopenia
	Atypical infection
	Parvovirus infection
	Felty syndrome

Overall score: **0%**

1 -

Question 103 of 110

□ □

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	Drug-induced pancytopenia
	Atypical infection
	Parvovirus infection
	Felty syndrome

Overall score: **0%**

1 -

□ Question 104 of 110

□ □

A 36-year-old female was referred to the outpatient haematology clinic having been referred by her GP with a falling white cell count. Eight weeks ago she saw her own GP complaining of feeling continuously tired after a viral upper respiratory illness two weeks prior to the onset of her symptoms. She also complained of feeling generally unwell and of having intermittent pains in all her joints and muscles without swelling or stiffness. Her respiratory symptoms had fully resolved and she denied any night sweats or weight loss. Her GP organised a set of screening blood investigations which revealed a white cell count of 2.6×10^9 g/dl (neutrophil count 2.0×10^9 g/dl). This was repeated on two further occasions over the next four weeks revealing results of 2.2 and 1.9 respectively (neutrophil counts of 1.5×10^9 g/dl and 1.2×10^9 g/dl respectively). Her past medical history included hypothyroidism for which she was treated with levothyroxine 150mcg OD.

Examination at the clinic revealed the presence of a systemically well female. Her blood pressure was 118/74 mmHg, heart rate 82 bpm, respiratory rate 16/min and temperature 36.6°C . Examination of her cardiovascular system was unremarkable. Similarly, examination of her gastrointestinal system was unremarkable, with no organomegaly identified. No cervical, axillary or inguinal lymph nodes were palpable. Examination of her ENT system was unremarkable.

Initial investigations at the clinic revealed the following results:

Hb	122 g/l
WCC	$2.0 \times 10^9/\text{l}$
Neutrophils	$1.3 \times 10^9/\text{l}$
Lymphocytes	$0.6 \times 10^9/\text{l}$
Monocytes	$0.1 \times 10^9/\text{l}$
Platelets	$224 \times 10^9/\text{l}$
Blood film	neutropaenia
B12	224 (NR 160-900 ng/l)
ESR	15 mm/hr
CRP	9 mg/l

TSH	0.35 (NR 0.4-3.6mu/ml)
FT4	11.6 (NR 4.5-13.6 mcg/dl)
Monospot test	negative
CMV serology	negative

What is the single most appropriate management option?

	Organise bone marrow aspirate and biopsy
	Organise peripheral blood flow cytometry analysis
	Repeat full blood count in four weeks
	Organise CT neck, thorax, abdomen and pelvis
	Organise blood cytogenetic analysis

Dashboard

Overall score: 0%

1 -

□ Question 104 of 110



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Dashboard

Overall score: **0%**
1 -

Question 105 of 110

□ □

A 23-year-old gentleman reviewed by the on-call medical team after having become unwell in the radiology department. He was undergoing a contrast-enhanced MRI of the small bowel to investigate ongoing diarrhoea. He has no other past medical history and takes no regular medications. He is not known to have any allergies.

Ten minutes ago he started feeling his throat closing up and became very anxious. This was shortly after having been given a contrast agent by IV injection. The medical emergency team arrives quickly and note him to be tachycardia at 132/min and hypotensive with a blood pressure of 82/35mmHg. He also has a widespread erythematous rash over his body and feels itchy. He is treated for anaphylactic shock.

Which blood tests could confirm anaphylaxis?

<input type="checkbox"/>	Histamine levels
<input type="checkbox"/>	Mast cell tryptase immediately and repeat within four hour
<input type="checkbox"/>	Mast cell tryptase immediately and repeat within 12 hours
<input type="checkbox"/>	Mast cell tryptase immediately and repeat within 24 hours
<input type="checkbox"/>	Serum immunoglobulins

Dashboard

Overall score: 0%

1 -

Question 105 of 110



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Dashboard

Overall score: 0%

1 -

□ Question 106 of 110



A 75-year-old female is admitted to hospital with community-acquired pneumonia. She is currently being treated with intravenous benzylpenicillin and oral clarithromycin. On the third day of admission, she complains of a sensation of fullness on the lateral aspect of her right leg.

Her past medical history includes osteoarthritis, temporal arteritis (now off steroids) and a uterine prolapse.

Bloods performed the day before show:

Hb	131 g/l
Platelets	$520 \times 10^9/l$
WBC	$14.2 \times 10^9/l$

Na ⁺	141 mmol/l
K ⁺	4.1 mmol/l
Urea	6.2 mmol/l
Creatinine	86 μ mol/l
CRP	78 mg/L

A doppler ultrasound scan is performed that shows a superficial vein thrombosis in the right leg. What is the most appropriate management?

	Treatment dose low molecular weight heparin (LMWH) and warfarin until warfarin therapeutic then anticoagulate for three months
	Prophylactic dose low molecular weight heparin (LMWH) for 30 days.
	Treatment dose low molecular weight heparin (LMWH) for 30 days.

	Non-steroidal anti-inflammatory drugs for 8-12 days.
	Low molecular weight heparin (LMWH) and warfarin until warfarin therapeutic then anticoagulate for six months.

Dashboard

Overall score: **0%**
1 -

Question 106 of 110

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Dashboard

Overall score: **0%**
1 -

□ Question 107 of 110

□ □

A 77 year old female is referred to the hospitals ambulatory care clinic by her GP after 2 months of increasing generalised malaise and 'lack of energy' over the past two months. She lives with her husband and until 9 weeks ago, continued to drive and go for walks in the countryside with no limitations to her exercise tolerance. Now, she feels 'tired all the time' but denies any problems with her mood. She has no history of psychiatric disorders. Her past medical history includes hypertension (well controlled on ramipril alone), hypercholesterolaemia (well controlled on simvastatin) and chronic lymphocytic leukemia, diagnosed 3 years ago and not requiring treatment.

On examination, she has warm peripheries with bilateral conjunctival pallor. She is alert and comfortable at rest. Non-tender lymphadenopathy in bilateral cervical chains. Her cardiovascular, respiratory, abdominal and neurological examinations are otherwise unremarkable. Her blood results are as follows:

Hb	7.2 g/dl
MCV	101 fl
Platelets	$70 \times 10^9/l$
WBC	$67.0 \times 10^9/l$
Neut	$4.0 \times 10^9/l$
WBC	$62.0 \times 10^9/l$
Reticulocytes	14%
Blood film and direct agglutination test	lymphocytosis, smudge cells, reticulocytes, red cell agglutination at physiological temperature

What is the cause of this patients anaemia?

	Cold autoimmune haemolytic anaemia
	Warm autoimmune haemolytic anaemia
	B12 deficiency anaemia

	Iron deficiency anaemia
	Microangiopathic haemolytic anaemia

Dashboard

Overall score: **0%**
1 -

□ Question 107 of 110



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	B12 deficiency anaemia

	Iron deficiency anaemia
	Microangiopathic haemolytic anaemia

Dashboard

Overall score: **0%**
1 -

□ Question 108 of 110



A 23-year-old man presents to the emergency department acutely unwell for the last 72 hours. He has been fatigued for the last month and has been having night sweats and has had several colds. Over the last 3 days, he has become more unwell, shivery and vomiting. He has noticed bruising on forearms and thighs. On examination, he is drowsy and has a temperature of 38.5°C. His blood pressure is 90/50 mmHg, heart rate 120/min. He is peripherally shut down with a cap refill time of 5 seconds. He has conjunctival pallor. He is given IV fluids and antibiotics by the emergency department. His blood results show:

Hb	89 g/l
Platelets	$43 \times 10^9/l$
WBC	$13.0 \times 10^9/l$
Neutrophils	$9.0 \times 10^9/l$
D-Dimer	5.8mg/L (<0.5)
INR	8.5
PT	89 seconds (9-12)
APTT ratio	1.7 (0.8-1.2)
Fibrinogen	0.1g/L (1.5 - 4.5)
Blood film	Faggot cells seen

Na ⁺	138 mmol/l
K ⁺	5.8 mmol/l
Urea	18 mmol/l
Creatinine	195 µmol/l
CRP	170 mg/l

--	--

Bilirubin	8 µmol/l
ALP	102 u/l
ALT	300 u/l
Albumin	38 g/l

He is transferred to ITU for ionotropic support. He is treated with fresh frozen plasma which corrects his coagulopathy. Haematology is involved and he has a bone marrow analysis performed. Cytogenetics shows a translocation of chromosomes 15 and 17. What is the appropriate treatment to give?

	All-trans retinoic acid
	R-CHOP
	Chlorambucil
	High dose prednisolone
	Ribavirin

Dashboard

Overall score: **0%**

1 -

□ Question 108 of 110

□ □

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Hb	89 g/l
Platelets	43 * 10 ⁹ /l
WBC	13.0 * 10 ⁹ /l
Neutrophils	9.0 * 10 ⁹ /l
D-Dimer	5.8mg/L (<0.5)
INR	8.5
PT	89 seconds (9-12)
APTT ratio	1.7 (0.8-1.2)
Fibrinogen	0.1g/L (1.5 - 4.5)
Blood film	Faggot cells seen

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Dashboard
Overall score: 0% 1 -

□ Question 109 of 110

□ □

A 28-year-old Afro-Caribbean male presents with a two-hour history of sudden onset left sided weakness. He denies any sensory involvement, dysarthria or dysphasia. He has a known history of sickle cell disease, with two previous episodes of transient ischaemic attacks and an episode of acute chest syndrome attack 10 days ago. On examination, he displays power of 1/5 in his left arm, 2/5 in his left leg, 5/5 in his right side. He reports no sensory disturbances, plantar responses are downgoing bilaterally, he is unable to perform finger-nose testing. He denies any illicit drug use, is a non-smoker and does not drink alcohol. He has no other past medical history. A hyperacute CT head demonstrates an area of acute ischaemia in the right internal capsule region. What is the most appropriate immediate treatment?

	Intravenous thrombolysis
	Aspirin 300mg
	Intravenous thrombolysis and mechanical thrombectomy
	Exchange transfusion
	Clopidogrel 300mg

Dashboard

Overall score: 0%

1 -

□ Question 109 of 110

□ □

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	Aspirin 300mg
	Intravenous thrombolysis and mechanical thrombectomy
	Exchange transfusion
	Clopidogrel 300mg

Dashboard

Overall score: **0%****1** -

□ Question 110 of 110

□ □

A 66-year-old gentleman was admitted for an elective aortic valve replacement. His past medical history included a non-ST elevation myocardial infarction three years prior, as well as hypertension and hypercholesterolaemia. He also suffered a deep vein thrombosis 16 years ago after open reduction and internal fixation of a tibial fracture requiring treatment with warfarin postoperatively. There was no family history of note. He was currently taking aspirin 75mg OD, clopidogrel 75mg OD, ramipril 5mg OD, bisoprolol 2.5mg OD, atorvastatin 20mg ON and lansoprazole 15mg OD.

Two days prior to the operation the patient was commenced on an intravenous heparin infusion which was continued perioperatively. The operation was deemed successful and the infusion was discontinued. He was commenced on enoxaparin 40mg OD sc as prophylaxis for venous thromboembolism postoperatively. He was otherwise making a good post operative recovery and was already mobilising readily. He complained of no chest pain or shortness of breath with no syncopal episodes. He resumed a full and normal diet and his bowel habits were normal. There was no evidence of bleed or any other adverse symptoms.

Routine post operative bloods at day 5 were as follows:

Hb	110 g/l
MCV	81 fl
Haematocrit	0.36
Platelets	28* 10 ⁹ /l
WBC	9.0 * 10 ⁹ /l
PT	36 seconds
APTT	86 seconds
D-dimer	136 ng/mL
Fibrinogen	236 g/L

Na ⁺	142 mmol/l
K ⁺	4.5 mmol/l

Urea	6.3mmol/l
Creatinine	77 µmol/l
Bilirubin	17 µmol/l
ALP	101 u/l
ALT	16 u/l
Albumin	39 g/l

Blood tests at day 2 were as follows:

Hb	116 g/l
Platelets	161 * 10 ⁹ /l
WBC	10.0 * 10 ⁹ /l

What is the single most appropriate management step?

<input type="radio"/>	Stop heparin and commence treatment with vitamin K
<input type="radio"/>	Continue with enoxaparin
<input type="radio"/>	Stop all anticoagulation until platelet count is >100 x 10 ⁹ /l
<input type="radio"/>	Stop enoxaparin and commence danaparoid
<input type="radio"/>	Stop enoxaparin and commence warfarin

Dashboard

Overall score: **0%**

1 -

Question 110 of 110



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	Stop all anticoagulation until platelet count is >100 x 10 ⁹ /l
	Stop enoxaparin and commence danaparoid
	Stop enoxaparin and commence warfarin

Dashboard

Overall score: **0%**

1 -

□ Question 1 of 155



A 49-year-old man attends the emergency department after becoming unwell with symptoms of progressive shortness of breath. The man is a Saudi Arabian national, who arrived in the UK 3 days previously on a business trip. The patient reported his shortness of breath had gradually worsened over the previous 2 days to the point whereby even minor physical activity had become challenging. In addition, the patient had noticed a dry cough, runny nose, myalgia and fever over a similar period. The patient denied any history of a productive cough, haemoptysis or gastrointestinal symptoms.

The patient reported being in generally good health aside from the type 2 diabetes mellitus and hypertension. To control these conditions, the patient took regular metformin and captopril. The patient had no known allergies to medications. The patient worked as an international businessman and normally resided in Riyadh with his family. He denied any contact with domestic animals in recent months and had not knowingly spent time with any unwell contacts.

General examination of the patient revealed a slightly overweight middle aged man who appeared unwell and diaphoretic. Basic physical observations are recorded in the below table. Examination of the respiratory system revealed mild tachypnoea at rest but with unremarkable percussion and auscultation of both lung fields. Examinations of the cardiovascular and abdominal systems were unremarkable. No clinical evidence of deep vein thrombosis was identified. Please see below for results of initial investigations requested following assessment by the respiratory medicine team.

Heart rate	95 beats / minute
Respiratory rate	23 respirations / minute
Blood pressure	128 / 85 mmHg
Oxygen saturations (room air)	89 %
Oxygen saturations (O ₂ 3 L / minute via nasal cannulae)	95 %
Glasgow coma scale score	15

Haemoglobin	145 g / dL
Mean cell volume	80.2 fl
White cell count	3.1 x 10 ⁹ / microlitre

Lymphocytes	1.0 x 10 ³ / microlitre (reference 1.5-4.0)
Platelets	115 x 10 ³ / microlitre
Urea	6.4 mmol / L
Creatinine	85 micromol / L
eGFR	85 ml / min / 1.73 m ²
Sodium	139 mmol / L
Potassium	4.0 mmol / L
C-reactive protein	74 mg / L (reference < 7)
Urinalysis	no abnormality detected
Chest x-ray	no pneumothorax; lung fields generally clear with no focal consolidation; no mass lesions
Electrocardiogram	normal sinus rhythm
Nasopharyngeal swab RT-PCR	MERS-CoV RNA detected

What is appropriate medical management for the patient's condition?

	Treatment in the community with anti-pyretic
	Intravenous ganciclovir (5 mg / kg twice daily for 14 days)
	In-patient supportive treatment to relieve symptoms and prevent or treat complications
	Oral oseltamivir (75 mg twice daily for 5 days)
	Inhaled zanamivir (10 mg twice daily for 5 days)

Dashboard

Overall score: **0%**

1 -

□ Question 1 of 155



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Glasgow coma scale score	15

Haemoglobin	145 g / dL
Mean cell volume	80.2 fl
White cell count	3.1 x 10 ⁹ / microlitre

Lymphocytes	1.0 x 10 ³ / microlitre (reference 1.5-4.0)
Platelets	115 x 10 ³ / microlitre
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	Inhaled zanamivir (10 mg twice daily for 5 days)

Dashboard
Overall score: 0% 1 -

Question 2 of 155



A 72-year-old lady was admitted with a cough productive of green phlegm, shortness of breath and a low-grade fever. Past medical history included Parkinson's disease for which she was on co-careldopa and hypertension. Chest x-ray showed a right basal consolidation and she was treated for pneumonia with oral antibiotics. As a result of the pneumonia she had a poor appetite and the patient had been refusing to take her medication.

She was given intravenous fluids and encouraged to take her oral antibiotics. Over the next 1-2 days, the nurses noted that she had started to have fever spikes of greater than 38°C, had developed a tremor and was becoming increasingly rigid, agitated and confused. Her blood pressure had also been extremely variable.

What test would help you confirm the diagnosis?

	Repeat chest x-ray
	Creatine kinase
	Blood cultures
	CT head
	Urine sample

Dashboard

Overall score: 0%

1 -

□ Question 2 of 155

□ □

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What test would help you confirm the diagnosis?

	Repeat chest x-ray
	Creatine kinase
	Blood cultures
	CT head
	Urine sample

Dashboard

Overall score: **0%****1** -

□ Question 3 of 155



A 31-year-old gentleman presents with fever, headache, abdominal pain and a rash on the chest 3 weeks after visiting South America.

On examination the temperature is 38.2°C. There is a rash on the chest consisting of rose-coloured blanching papules. The respiratory rate is 20 breaths/min and the heart rate is 58 beats per minute. The chest is clear to auscultation. The abdomen is diffusely tender and there is mild splenomegaly.

Initial blood results are as follows:

Hb	128 g/l
Platelets	184 * 10 ⁹ /l
WBC	3.9 * 10 ⁹ /l
Na ⁺	131 mmol/l
K ⁺	3.3 mmol/l
Urea	7.2 mmol/l
Creatinine	141 µmol/l
Bilirubin	46 µmol/l
ALP	147 u/l
ALT	96 u/l
Albumin	38 g/l
CRP	52 mg/l

What is the most appropriate initial antimicrobial therapy?

	Ampicillin

	Chloramphenicol
	Trimethoprim-sulfamethoxazole
	Cefotaxime
	Streptomycin

Dashboard

Overall score: **0%**
1 -

□ Question 3 of 155



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Ampicillin

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	Trimethoprim-sulfamethoxazole
	Cefotaxime
	Streptomycin

Dashboard

Overall score: **0%**
1 -

Question 4 of 155

□ □

A 30-year-old male with HIV and a viral load of 10^6 and CD4 dropping from 500 to 300 cells/ μ l since his last visit. The above mentioned results are taken while he is on his third line of therapy. What is the most likely cause of his repeated treatment failures?

	Non-compliance
	Infection with multi-resistant HIV strain
	Co-infection with a new HIV strain
	Superinfection with a new HIV strain
	CYP interactions

Dashboard

Overall score: 0%

1 -

Question 4 of 155

□ □

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	Co-infection with a new HIV strain
	Superinfection with a new HIV strain
	CYP interactions

Dashboard

Overall score: **0%**

1 -

Question 5 of 155

□ □

A 27 year old Caucasian man has just returned from a 12 week trip to Ivory Coast where he was working as a missionary. He had not consulted a travel clinic for immunisations and had taken no malaria prophylaxis. During his trip he slept in a hammock outside and he took a daily wash in the river near the church where he was working. For the last few days of his trip he felt very unwell. He developed fevers, muscle aches and a headache, however this was improving and he had been feeling much better when he arrived home in the UK.

He has been home for 24 hours. Today he felt very much worse and presented to A and E.

On admission:

- Temperature: 39.1C
- Blood pressure: 89/61mmHg
- Pulse: 68 / min
- Respiratory rate: 26 / min
- Oxygen saturations: 97% on room air.

His initial investigations show:

Hb	11.1 g/dl
Platelets	61 * 10 ⁹ /l
WBC	3.3 * 10 ⁹ /l
Neutrophils	2.6 * 10 ⁹ /l
Lymphocytes	0.6 * 10 ⁹ /l

Na ⁺	146 mmol/l
K ⁺	4.1 mmol/l
Bicarbonate	16 mmol/l
Urea	17.4 mmol/l

Creatinine	321 mol/l
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Bilirubin	88 mol/l
ALP	322 u/l
ALT	821 u/l
γGT	421 u/l
Albumin	29 g/l

Following discussion with the ID consultant on call, he is isolated while a blood sample is sent to Public Health England's imported fever service. He received empirical therapy for Malaria with Artesunate and for sepsis with Piperacillin/Tazobactam and Gentamicin, however he rapidly deteriorated and died within 24 hours of admission. Following discussion with Public Health England, who confirm that there was no evidence of a nosocomially transmitted Viral Haemorrhagic Fever, he has a post mortem examination which reveals Councilman bodies in his liver.

What would likely have prevented his death?

	Sleeping under an insecticide treated bed net
	Avoiding bathing in the river
	Live attenuated Yellow Fever vaccine
	Prophylaxis with doxycycline
	Avoiding unprotected sex

Dashboard

Overall score: **0%**

1 -

Question 5 of 155

□ □

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Dashboard

Overall score: **0%**

1 -

Question 6 of 155

□ □

A 23-year-old gentleman presents to GUM clinic. He has been referred by his GP as he presented with dysuria and a negative urine dipstick test. A sexual health screen, including blood tests for HIV and syphilis serology, are requested. What form of consent is required?

	No consent
	Implied consent
	Verbal consent
	Written consent
	Written consent for HIV testing and verbal consent for sexual health screening

Dashboard

Overall score: 0%

1 -

Question 6 of 155



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Dashboard

Overall score: **0%**

1 -

Question 6 of 155



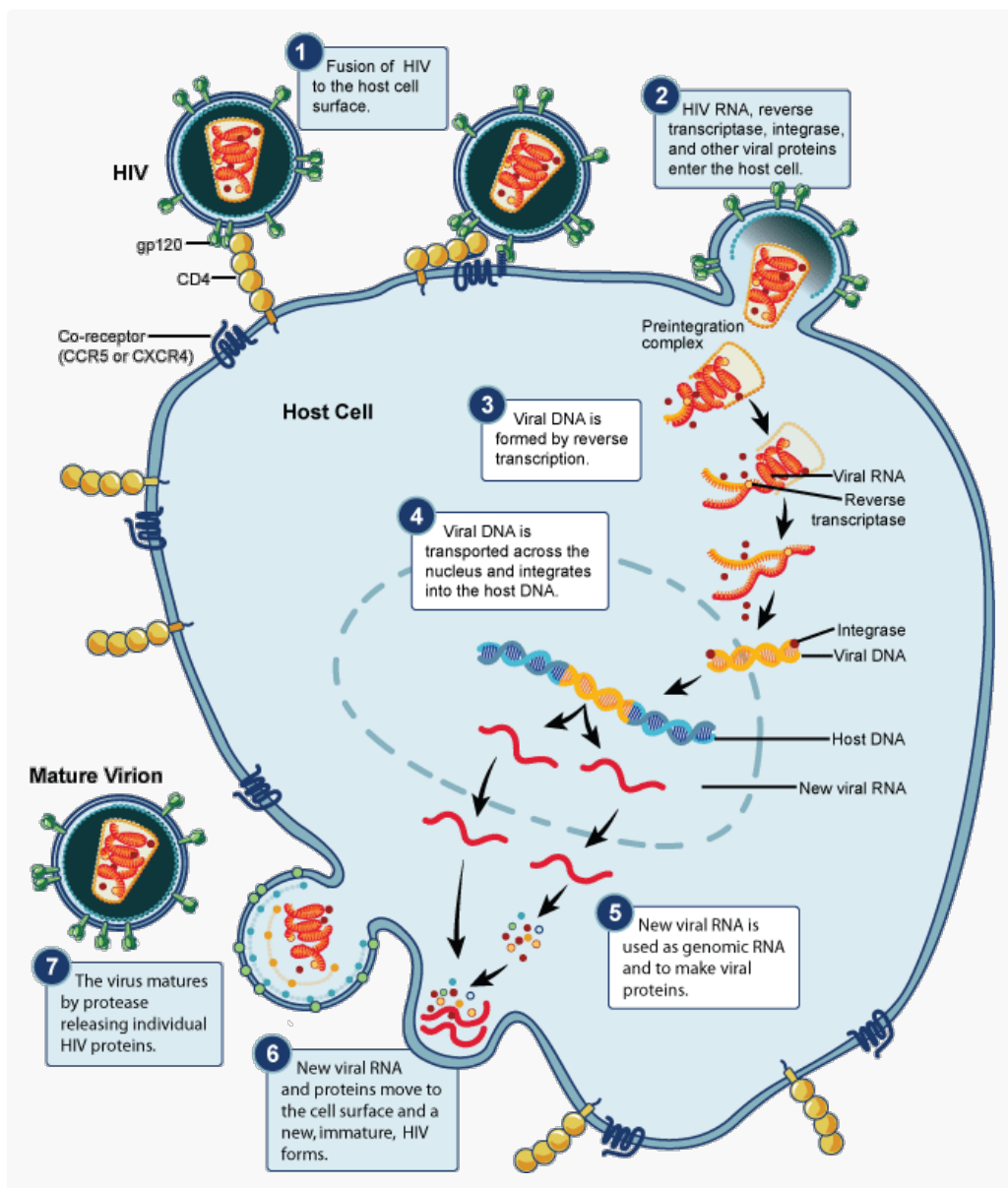
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	Verbal consent
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	Written consent for HIV testing and verbal consent for sexual health screening

Dashboard

Overall score: 0%

1 -



□ Question 7 of 155

□ □

A 19-year-old from Cameroon has moved to the UK to study nursing. She arrived three months ago. She has been having diarrhoea for a month and noticed a fleeting erythematous rash on her torso. Her GP orders a set of bloods, which reveal a dramatic eosinophilia. She has not lost weight and, if anything, seems concerned that she is becoming overweight since moving to the UK. She has been well previously with no allergies or medication. There is no significant family history but she tells you that her brother had an 'eye worm' last year.

A stool is sent for ova cysts and parasites and microscopy and culture. Multiple *Strongyloides stercoralis* larvae can be seen on charcoal culture. She is commenced on a seven-day course of Ivermectin.

Four days later she is brought into the Emergency Department, with a GCS of 6.

What is the diagnosis?

	Disseminated <i>Strongyloides</i> infection
	Co-infection with Onchocerciasis
	Co-infection with Loa
	Ivermectin related hypoglycaemia
	Insulin abuse

Dashboard

Overall score: 0%

1 -

□ Question 7 of 155

□ □

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Dashboard

Overall score: **0%**

1 -

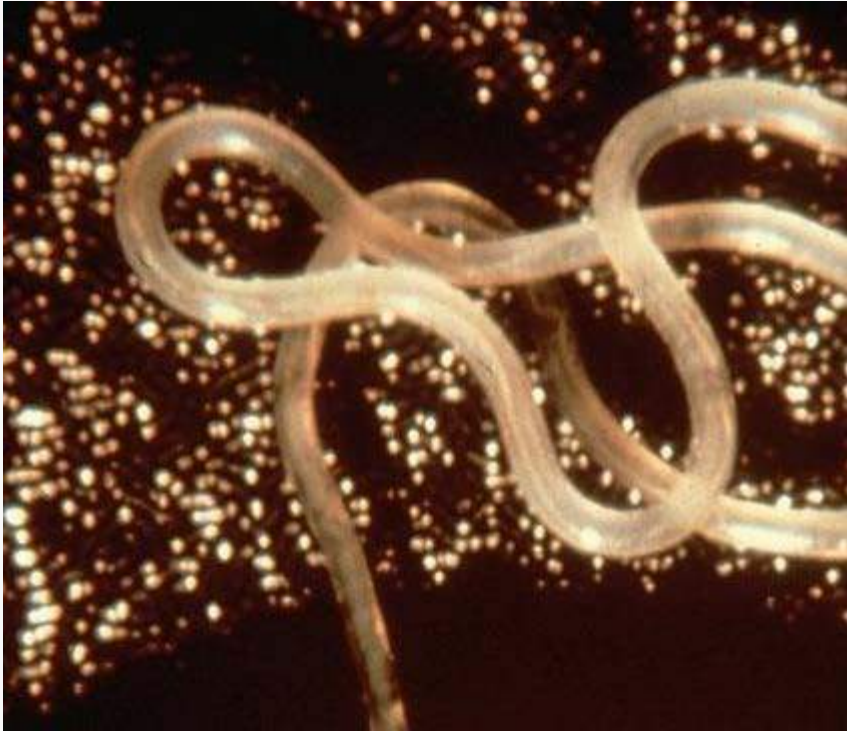
Question 7 of 155

A 19-year-old from Cameroon has moved to the UK to university. She has been having diarrhoea for a month and noticed a fleeting erythematous rash which reveal a dramatic eosinophilia. She has not lost weight since moving to the UK. She has been well in her home country. No family history but she tells you that her brother had an abdominal mass.

A stool is sent for ova cysts and parasites and microscopy shows eosinophils seen on charcoal culture. She is commenced on a severe allergic reaction.

Four days later she is brought into the Emergency Department with severe hypoglycaemia.

What is the diagnosis?



	Disseminated <i>Strongyloides</i> infection
	Co-infection with Onchocerciasis
	Co-infection with Loa
	Ivermectin related hypoglycaemia
	Insulin abuse

Dashboard

Overall score: 0%

1 -

□ Question 8 of 155

□ □

A 37-year-old gentleman presents to the Emergency Department with acute onset shortness of breath and right sided pleuritic chest pain. He is known to be HIV positive and his latest CD4 count is 190/mm³. The last clinic letter suggests he may be non-compliant with his anti-retroviral medication due to persistent diarrhoea. On examination, he has decreased breath sounds on the right with fine scattered crepitations in both lung fields. Oxygen saturations are 93% on breathing air. A chest x-Ray reveals a right sided pneumothorax measuring 1 cm at the hilum.

What pulmonary infection would you suspect?

	<i>Mycobacterium tuberculosis</i>
	<i>Pneumocystis jirovecii</i>
	<i>Aspergillus fumigatus</i>
	<i>Histoplasma capsulatum</i>
	<i>Haemophilus influenzae</i>

Dashboard

Overall score: 0%

1 -

□ Question 8 of 155

□ □

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Dashboard

Overall score: **0%****1** -

□ Question 8 of 155

□ □

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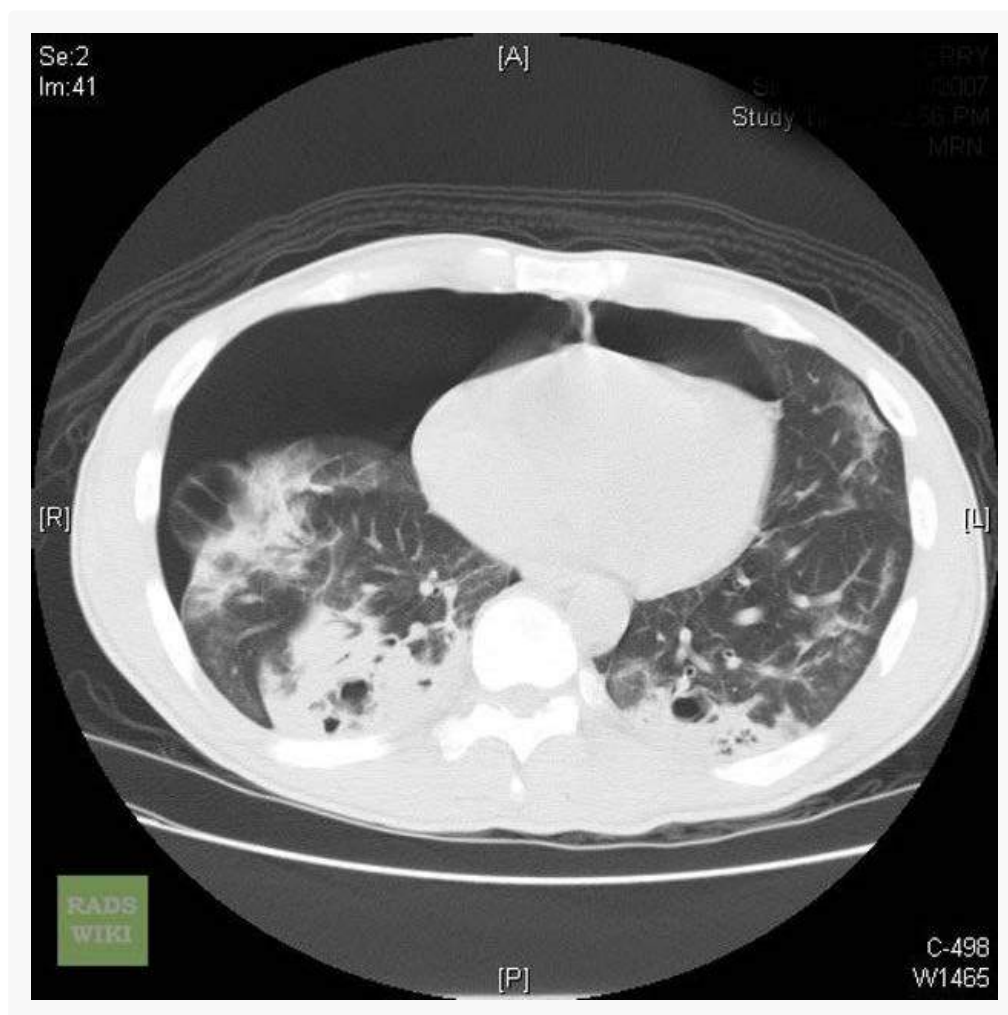
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	<i>Histoplasma capsulatum</i>
	<i>Haemophilus influenzae</i>

Dashboard

Overall score: **0%**

1 -



□ Question 9 of 155



A 32-year-old lady presented after returning from Nigeria 3 weeks ago to her GP complaining of feeling feverish and pain in her joints making walking difficult. She denied any rash, or headaches however she has been very drowsy and lethargic in the past week. She spent a week in Nigeria and visited her relatives both in urban and rural areas. She has been taking her malaria prophylaxis tablets. She denies being sexually active for the past year. Her GP sent off three malaria screens which were negative.

Two months later she represents to the emergency department following a seizure and is found to be confused and disorientated. She is irritable, and you notice her hand is trembling. Her sister says she has lost her appetite and weight and has been behaving strangely in the past month. She spends most of her time in bed during the day complaining of a headache and has become withdrawn. On examination, there is hypertonia in her limbs, with hyperreflexia, but the rest of examination is difficult as she is uncooperative.

Investigations:

Na ⁺	140mmol/l
K ⁺	4.3 mmol/l
Urea	5.3 mmol/l
Creatinine	85 µmol/l
Serum bilirubin	15 µmol/l
Serum alkaline phosphatase	85 IU/l
Serum aspartate aminotransferase	19 IU/l
Serum Albumin	25 g/l
C Reactive protein (CRP)	25 mg/l
Erythrocyte Sedimentation Rate (ESR)	75 mm/hr
Haemoglobin	96 g/l
White cell count	10.2 x 10 ⁹ /L
Neutrophils	8.9 x 10 ⁹ /L

Eosinophilia	0.1 x10 ⁹ /L
Lymphocytes	1.8 x 10 ⁹ /L
Platelets	140 x 10 ⁹ /L
INR	1.0

What is the likely causative organism?

	<i>Plasmodium vivax</i>
	<i>Borrelia burgdorferi</i>
	<i>Trypanosoma gambiense</i>
	<i>Trypanosoma rhodesiense</i>
	<i>Trypanosoma cruzi</i>

Dashboard

Overall score: 0%

1 -

□ Question 9 of 155



A 32-year-old lady presented after returning from Nigeria 3 weeks ago to her GP complaining of feeling feverish and pain in her joints making walking difficult. She denied any rash, or headaches however she has been very drowsy and lethargic in the past week. She spent a week in Nigeria and visited her relatives both in urban and rural areas. She has been taking her malaria prophylaxis tablets. She denies being sexually active for the past year. Her GP sent off three malaria screens which were negative.

Two months later she represents to the emergency department following a seizure and is found to be confused and disorientated. She is irritable, and you notice her hand is trembling. Her sister says she has lost her appetite and weight and has been behaving strangely in the past month. She spends most of her time in bed during the day complaining of a headache and has become withdrawn. On examination, there is hypertonia in her limbs, with hyperreflexia, but the rest of examination is difficult as she is uncooperative.

Investigations:

Na ⁺	140mmol/l
K ⁺	4.3 mmol/l
Urea	5.3 mmol/l
Creatinine	85 µmol/l
Serum bilirubin	15 µmol/l
Serum alkaline phosphatase	85 IU/l
Serum aspartate aminotransferase	19 IU/l
Serum Albumin	25 g/l
C Reactive protein (CRP)	25 mg/l
Erythrocyte Sedimentation Rate (ESR)	75 mm/hr
Haemoglobin	96 g/l
White cell count	10.2 x 10 ⁹ /L
Neutrophils	8.9 x 10 ⁹ /L

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	<i>Trypanosoma rhodesiense</i>
	<i>Trypanosoma cruzi</i>

Dashboard

Overall score: 0%

1 -

Question 10 of 155

□ □

A 32-year-old South African man presents to the rheumatology clinic for review. He was diagnosed with ankylosing spondylitis 5 years ago and subsequently failed on a course of NSAIDs and an extended course of glucocorticoids. He was therefore started on Etanercept 1 year ago and had reported a significant reduction in his symptoms.

Today he reports an increase in lethargy over the last 2 months. This has been associated with a degree of breathlessness, a dry cough and weight loss that he is unable to quantify.

When you come to examine him you notice a tender swelling over the sternum. The patient admits to falling off his bike recently and jarring the handle bars into his chest. Further examination reveals a soft, cool, fluctuant swelling over the mid sternum. There is a small break in the skin with surrounding erythema. Respiratory examination reveals a reduced expansion with some upper zone crackles.

What is the likely diagnosis?

	Pathological fracture secondary to glucocorticoid use
	Localised cellulitis
	Tuberculosis
	Restrictive lung disease secondary to costovertebral involvement of ankylosing spondylitis
	Upper lobe pulmonary fibrosis

Dashboard

Overall score: 0%

1 -

Question 10 of 155

□ □

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Dashboard

Overall score: **0%**

1 -

Question 10 of 155

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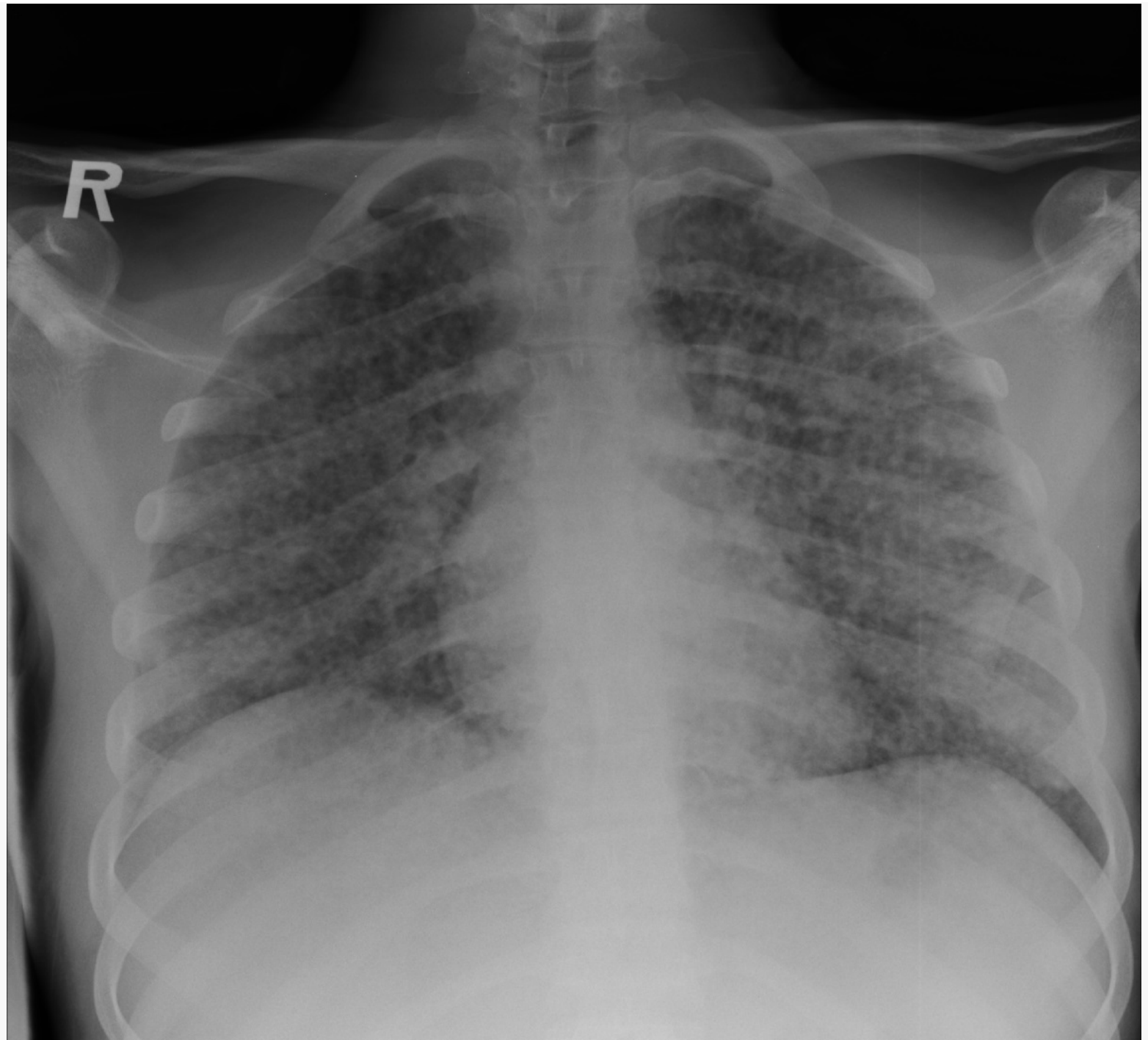
What is the likely diagnosis?

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	Localised cellulitis
	Tuberculosis
	Restrictive lung disease secondary to costovertebral involvement of ankylosing spondylitis
	Upper lobe pulmonary fibrosis

Dashboard

Overall score: **0%**

1 -



Question 10 of 155

A 32-year-old South African man presents to the rheumatologist with a history of ankylosing spondylitis 5 years ago and subsequently failed on treatment with TNF inhibitors. He was therefore started on Etanercept 1 year ago and has been on it ever since.

Today he reports an increase in lethargy over the last few weeks, breathlessness, a dry cough and weight loss that he has noticed over the last 3 months.

When you come to examine him you notice a tender swelling over the right lower chest recently and jarring the handle bars into his chest. There is a small break in the skin with some crepitation and expansion with some upper zone crackles.

What is the likely diagnosis?



Pathological fracture secondary to glucocorticoid use

Localised cellulitis

Tuberculosis

Restrictive lung disease secondary to costovertebral involvement of ankylosing spondylitis

Upper lobe pulmonary fibrosis

Dashboard

Overall score: 0%

1 -

□ Question 11 of 155



A 65-year-old man is undergoing treatment in the intensive care unit. He had presented 8 days previously after suffering a seizure at home. He had been unable to give a coherent history at the time of presentation but his family had reported he had been unwell for about two weeks. Initial symptoms included a fever, myalgia, anorexia and an intense itching of his left arm. Subsequently, the patient had developed progressive confusion and agitation and was incoherent by the time of presentation to hospital. The patient was a long-term resident of the UK, but had made a trip back to his native India around 6 months previously. During that trip, his wife recalled the patient being bitten by a dog in his family village, although the wound had been minor and healed without incident after basic first aid. Medical history was otherwise fairly unremarkable, including hypertension, tablet-controlled type 2 diabetes and gout.

At presentation, the patient had been noted to be highly agitated and disorientated. Hypersalivation was noted and patient had been refusing to eat or drink. Examination had been limited by the patient's agitation but no overt focal neurological symptoms were noted in the cranial nerve or peripheral nervous examination. After the patient had been sedated, it was noted that striking a large muscle group with a tendon hammer led to few seconds of mounding of the muscle.

CSF protein	457 g / dL
CSF Microscopy	NAD
CSF rabies virus neutralising antibodies	Not detected
Serum rabies virus neutralising antibodies	Detected

At the present time, the patient is receiving end-of-life care. He is sedated and appears comfortable secondary to midazolam delivered by a syringe driver. His family wish to be present at his bedside.

What is the appropriate personal protection for healthcare workers and family members to use while in contact with the patient?

	High isolation
	Standard precautions
	Respiratory isolation

	Reverse isolation
	Biocontainment precautions

Dashboard

Overall score: **0%**

1 -

□ Question 11 of 155



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	High isolation
	Standard precautions
	Respiratory isolation

	Reverse isolation
	Biocontainment precautions

Dashboard

Overall score: **0%**

1 -

□ Question 12 of 155



A 38-year-old male presented to the Emergency Department complaining of feeling unwell. He complained of a headache that had been present for the last two days which he described a continuous ache worse in the morning, as well as a sore throat. He later developed diarrhoea, opening his bowels three times per day passing watery loose stool. Since then he has deteriorated, complaining of nausea and vomiting on the day of admission. He also noted a new rash on his chest which developed over the last few hours and complained of pains in his muscles. He had returned two weeks ago from a six-month backpacking expedition around Africa and Far East Asia; he was prescribed doxycycline as antimalarial prophylaxis but had discontinued them two weeks into his trip after suffering from severe sunburns. He had not taken recommended vaccinations prior to his trip as he was engaged with work commitments. His past medical history comprised of asthma and depression for which he was prescribed sertraline 100mg OD and Clenil modulite 2 puffs BD.

Examination revealed the presence of an unwell gentleman. His temperature was 40.1°C, heart rate 122 bpm, respiratory rate 22/min, oxygen saturations 95% on air and he had a blood pressure of 94/68 mmHg. He had a plethoric facial appearance, and multiple petechiae were noted on his chest and face. Examination of his cardiovascular system revealed the presence of normal heart sounds with a JVP of 2cm and a bounding radial pulse and vasodilated peripheries. Examination of his respiratory system revealed tachypnoea but with vesicular breath sounds. Examination of the gastrointestinal and neurological systems was unremarkable, with no neck stiffness, negative Kernig's and Brudzinski's signs. His GCS was 15. Multiple insect bites were noted on his legs and arms.

He was promptly transferred to the resuscitation area where two large bore cannulae were inserted and aggressive intravenous fluid resuscitation was commenced. A urinary catheter was inserted. The doctor inserting the cannulae noted that the sites of venepuncture continued to ooze despite the application of continual mechanical pressure.

Initial investigations revealed the following results:

Hb	102 g/l
Platelets	$8 \times 10^9/l$
WBC	$3.2 \times 10^9/l$
Neutrophils	$2.2 \times 10^9/l$
Lymphocytes	$0.8 \times 10^9/l$

Monocytes	0.1 * 10 ⁹ /l
Eosinophils	0.1 * 10 ⁹ /l
ESR	48 mm/hr

PTT	17 (NR 12-14s)
APTT	53 (NR 30-46s)
Fibrinogen	0.6 (NR 2-4g/l)
D-Dimer	428 (NR <230ng/ml)

Na ⁺	130 mmol/l
K ⁺	6.2 mmol/l
Urea	18.1 mmol/l
Creatinine	262 µmol/l
CRP	96 mg/l

Bilirubin	28 µmol/l
ALP	162 u/l
ALT	122 u/l
Total protein	52 g/l
Albumin	22 g/l

Blood MCS x3: awaiting result

Urine MCS: awaiting result

Thick film: negative

Thin film: awaiting result

Portable chest x-ray: normal appearance of heart and lung fields

ECG: sinus tachycardia 122bpm

Urinalysis: trace protein, ketones ++, nil else

What is the most likely diagnosis?

	Viral haemorrhagic fever
	Malaria
	Typhus
	Thrombotic thrombocytopenic purpura

Dashboard

Overall score: **0%**

1 -

□ Question 12 of 155



A 38-year-old male presented to the Emergency Department complaining of feeling unwell. He complained of a headache that had been present for the last two days which he described a continuous ache worse in the morning, as well as a sore throat. He later developed diarrhoea, opening his bowels three times per day passing watery loose stool. Since then he has deteriorated, complaining of nausea and vomiting on the day of admission. He also noted a new rash on his chest which developed over the last few hours and complained of pains in his muscles. He had returned two weeks ago from a six-month backpacking expedition around Africa and Far East Asia; he was prescribed doxycycline as antimalarial prophylaxis but had discontinued them two weeks into his trip after suffering from severe sunburns. He had not taken recommended vaccinations prior to his trip as he was engaged with work commitments. His past medical history comprised of asthma and depression for which he was prescribed sertraline 100mg OD and Clenil modulite 2 puffs BD.

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Portable chest x-ray: normal appearance of heart and lung fields

ECG: sinus tachycardia 122bpm

Urinalysis: trace protein, ketones ++, nil else

What is the most likely diagnosis?

	Viral haemorrhagic fever
	Malaria
	Typhus
	Thrombotic thrombocytopenic purpura

Dashboard

Overall score: **0%**

1 -

□ Question 13 of 155



A 40-year-old man attends the emergency department with a 3-day history of worsening respiratory symptoms. The patient reported that his initial symptoms had included a runny nose, sore throat and myalgia. Subsequently, he developed a persistent dry cough and had experienced mild shortness of breath on exertion, for example after climbing a flight of stairs. The patient had not measured his temperature at home but recalled that, at times, he had felt extremely hot and sweaty. The patient denied any other symptoms, including a cough productive of sputum or blood, abdominal symptoms or chest pain.

The patient reported having just returned from a 2 week holiday in Egypt. The majority of the patient's trip had been based in large towns and cities; however, the patient had also participated in a 4-day 'camel trek' through the desert. On direct questioning, the patient reported having drunk camel milk offered to him by his guides, which he did not think had been pasteurised or otherwise processed prior to consumption. The patient had not knowingly spent time around any unwell individuals and had not sought medical advice while overseas. Prior to this holiday, the patient had not travelled outside of the UK for several years.

The patient was in generally good health, with no active chronic medical problems. The patient's only previous attendance at the emergency department was 5 years previously when he had treated for a broken ankle sustained when playing football. The patient took no regular medications and had no known allergies to medications. The patient did not regularly consume alcohol or recreational drugs but did smoke 5-10 cigarettes per day.

General examination of the patient showed a middle-aged man who appeared flushed in the face and unwell. Examination of the respiratory system demonstrated normal air entry and resonance to both lung fields, with no significant added sounds on auscultation. With the patient at rest, there were no signs of respiratory distress. Examination of the cardiovascular and abdominal systems demonstrated no significant abnormality. There was no notable rashes and no signs of peripheral deep vein thrombosis.

Heart rate	92 beats / minute
Respiratory rate	18 respirations / minute
Blood pressure	125 / 76 mmHg
Oxygen saturations	95 %
Glasgow coma scale score	15
	o

Temperature	38.2 C
-------------	--------

Haemoglobin	135 g / dL
White cell count	3.7 x 10 ³ / microlitre
Neutrophils	2.5 x 10 ³ / microlitre (reference 1.8-7.8)
Lymphocytes	1.0 x 10 ³ / microlitre (reference 1.5-4.0)
Platelets	123 x 10 ³ / microlitre
Urea	6.1 mmol / L
Creatinine	82 micromol / L
Alkaline phosphatase	154 U / L (reference 35-100)
ALT	72 U / L (reference 3-36)
Bilirubin	23 micromol / L (reference < 26)
Chest x-ray	clear lung fields, no pneumothorax

What is the likely pathogen responsible for the patient's illness?

	MERS coronavirus
	Dengue virus
	West Nile virus
	Junin virus
	Ebola virus

Dashboard

Overall score: **0%**

1 -

□ Question 13 of 155



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Platelets	123 x 10 ³ / microlitre
Urea	6.1 mmol / L
Creatinine	82 micromol / L
Alkaline phosphatase	154 U / L (reference 35-100)
ALT	72 U / L (reference 3-36)
Bilirubin	23 micromol / L (reference < 26)
Chest x-ray	clear lung fields, no pneumothorax

What is the likely pathogen responsible for the patient's illness?

	MERS coronavirus
	Dengue virus
	West Nile virus
	Junin virus
	Ebola virus

Dashboard
Overall score: 0% 1 -

□ Question 14 of 155

□ □

A 21-year-old male presents on the medical take with fever, rigors and a headache which started yesterday. He returned from a 2 week trip travelling across south east Asia 5 days ago. His last destination was Bangkok and prior to this he had been in the mostly rain forested area of northern Thailand. His symptoms started around 5 days after arriving in Thailand.

He did not take malaria prophylaxis during the trip but had received all the recommend vaccinations. He travelled with his long-term girlfriend and he reports always using condoms during intercourse.

On examination he has a fever of 38.9°C, a pulse of 92 beats per minute, blood pressure of 115/80 mmHg, oxygen saturations of 99% on air. There is an area of confluent blanching erythema over the precordium and fundoscopy was poorly tolerated due to pain.

What is the most likely diagnosis?

	Dengue fever
	HIV seroconversion
	Malaria
	Typhoid
	Infectious mononucleosis

Dashboard

Overall score: **0%**

1 -

□ Question 14 of 155

□ □

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What is the most likely diagnosis?

	Dengue fever
	HIV seroconversion
	Malaria
	Typhoid
	Infectious mononucleosis

Dashboard

Overall score: 0%

1 -

□ Question 15 of 155

□ □

A 6 year-old boy from Sierra Leone presents with a 1 week history of painful left arm. He is homozygous for sickle cell disease. On examination the child is pyrexial at 40.2°C and there is bony tenderness over the left humeral shaft. Investigations are:

Hb	7.1 g/dL
Blood culture	Gram negative rods

X-ray left humerus: Osteomyelitis - destruction of bony cortex with periosteal reaction.

What is the most likely responsible pathogen?

	<i>Escherichia coli</i>
	Non-typhi <i>Salmonella</i>
	<i>Pseudomonas aeruginosa</i>
	<i>Staphylococcus Aureus</i>
	Parvovirus B19

Dashboard

Overall score: 0%

1 -

□ Question 15 of 155

□ □

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	<i>Staphylococcus Aureus</i>
	Parvovirus B19

Dashboard

Overall score: **0%**

1 -

Question 16 of 155

□ □

A 32-year-old gentleman presents to the emergency department with severe nausea, vomiting and diarrhoea. He was recently at a reunion where 18 out of 25 guests have developed similar symptoms shortly afterwards. On examination he appears clinically dehydrated but his vital parameters are all normal. He has no past medical history and otherwise his examination is normal. You suspect norovirus; what is the most appropriate investigation?

	Serum serology
	Faecal or vomitus toxicology
	Faecal or vomitus viral PCR
	Serum toxins
	Serum viral PCR

Dashboard

Overall score: 0%

1 -

Question 16 of 155

□ □

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	Serum serology
	Faecal or vomitus toxicology
	Faecal or vomitus viral PCR
	Serum toxins
	Serum viral PCR

Dashboard

Overall score: **0%**

1 -

Question 17 of 155

□ □

A 30-year-old man returns from a stag do in Amsterdam with fever, headache and abdominal pain. He was away for 2 days and drunk 40-50 units of alcohol. He also had unprotected sex with a local girl and vaguely remembers falling in the canal on the second night. He is febrile with a blood pressure 100/70 mmHg. His bloods tests reveal :

Routine tests in the emergency department are ordered:

Hb 95 g/l WBC $20 \times 10^9/l$, Platelets $150 \times 10^9/l$

Na^+ 135 mmol/l , K^+ 5.0 mmol/l

Urea 15 mmol/l , Creatinine 300 μ mol/l

Bilirubin 35 μ mol/l , ALP 200 u/l , ALT 70 u/l

CXR - pulmonary haemorrhage

What is the most likely diagnosis?

	Acute hepatitis A
	Acute hepatitis B
	Goodpastures syndrome
	Leptospirosis
	Atypical pneumonia

Dashboard

Overall score: 0%

Question 17 of 155

□ □

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Na^+ 135 mmol/l , K^+ 5.0 mmol/l

Urea 15 mmol/l , Creatinine 300 μ mol/l

Bilirubin 35 μ mol/l , ALP 200 u/l , ALT 70 u/l

CXR - pulmonary haemorrhage

What is the most likely diagnosis?

	Acute hepatitis A
	Acute hepatitis B
	Goodpastures syndrome
	Leptospirosis
	Atypical pneumonia

Dashboard

Overall score: **0%**

□ Question 18 of 155

□ □

A 55 year-old patient presents with a 7 day history of nausea, breathlessness and feeling generally unwell. He is an HIV positive man who was recently started on anti-retroviral therapy in South Africa. On examination his chest is clear. His investigations are:

Chest X-ray: No abnormality seen

CD4 count	380 cells / mm ³
Amylase	800 units / dL
Lactate	3.8 mmol / L

What is the most likely cause?

	Pneumocystis jirovecii pneumonia (PCP)
	Gallstone pancreatitis
	Epstein-Barr Virus
	Nucleoside reverse transcriptase inhibitor (NRTI) therapy
	Non-nucleoside reverse transcriptase inhibitor (NNRTI) therapy

Dashboard

Overall score: 0%

1 -

□ Question 18 of 155

□ □

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	Pneumocystis jirovecii pneumonia (PCP)
	Gallstone pancreatitis
	Epstein-Barr Virus
	Nucleoside reverse transcriptase inhibitor (NRTI) therapy
	Non-nucleoside reverse transcriptase inhibitor (NNRTI) therapy

Dashboard

Overall score: **0%**

1 -

□ Question 19 of 155



You are called to the Emergency Department to review a 60-year-old Indian female who returned from a six month trip to the north east of India five days ago. She presented with a three week history of a productive cough, producing large quantities of brown sputum. She has also been experiencing fevers daily and complains of being extremely sweaty over night. On further questioning there is no history of weight loss or TB contacts. The patient reports that as she has felt relatively well with these symptoms she had not presented earlier. It was, in fact a concerned relative who thought the patient had coughed up blood who had brought her in to hospital today.

Examination reveals a comfortable patient with evidence of a right lower zone pneumonia. The is confirmed on chest radiograph. You send a number of investigations including sputum for routine culture and acid fast bacilli. The results of which are shown below:

Hb	120 g/l	Na ⁺	139 mmol/l
Platelets	350 * 10 ⁹ /l	K ⁺	3.9 mmol/l
WBC	13.0 * 10 ⁹ /l	Urea	8.0 mmol/l
Neuts	8.0 * 10 ⁹ /l	Creatinine	110 µmol/l
Lymphs	1.5 * 10 ⁹ /l	CRP	35 mg/l
Eosin	1.8 * 10 ⁹ /l		
Sputum MC&S	Negative		
Sputum TB PCR	Negative		

What is the most appropriate treatment for this patient?

	Rifater and ethambutol
	Amoxicillin
	Praziquantel

	Augmentin and clarithromycin
	Fluconazole

Dashboard

Overall score: **0%**

1 -

□ Question 19 of 155



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Eosin	1.8 * 10 ⁹ /l		
Sputum MC&S	Negative		
Sputum TB PCR	Negative		

What is the most appropriate treatment for this patient?

	Rifater and ethambutol
	Amoxicillin
	Praziquantel

	Augmentin and clarithromycin
	Fluconazole

Dashboard

Overall score: **0%**
1 -

Question 20 of 155

□ □

A 33-year-old gentleman attends a routine sexual health clinic screen and is found to be HIV positive, with a CD4 count of 900 cells/mm³. He remains asymptomatic. What is the recommended next best step in terms of treatment?

	Start antiretrovirals when CD4 count reaches 350 cells/mm ³ or less
	Start antiretrovirals when CD4 count reaches 500 cells/mm ³ or less
	Start antiretrovirals when becomes symptomatic
	Start antiretrovirals immediately
	Start antiretrovirals when CD4 count reaches 250 cells/mm ³ or less

Dashboard

Overall score: **0%**

1 -

□ Question 20 of 155

□ □

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	Start antiretrovirals immediately
	Start antiretrovirals when CD4 count reaches 250 cells/mm ³ or less

Dashboard

Overall score: **0%****1** -

□ Question 21 of 155

□ □

A 33-year-old man who is HIV positive is admitted to the Emergency Department with confusion and drowsiness. He has been complaining of headaches for a number of days. On examination heart rate is 90/min, blood pressure 104/78 mmHg and temperature is 37.2°C. He is confused giving a Glasgow Coma Scale (GCS) score of 14. There is no photophobia or neck stiffness.

His infectious diseases consultant reports that he is prescribed highly active antiretroviral treatment (HAART) but his compliance is poor and he often misses clinic appointments.

A CT scan is requested:



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What is the most likely diagnosis?

	Cerebral toxoplasmosis
	Tuberculosis
	CMV encephalitis
	Progressive multifocal leukoencephalopathy
	Cryptococcal infection

Dashboard

Overall score: 0%

1 -

Question 21 of 155



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Dashboard

Overall score: **0%**
1 -

Question 21 of 155



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What is the most likely diagnosis?

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	Tuberculosis
	CMV encephalitis
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	Cryptococcal infection

Overall score: 0%

1 -

7



W 114 : L 51

Question 21 of 155

□ □

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© Image used on license from Radiopaedia

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	Tuberculosis
	CMV encephalitis
	Progressive multifocal leukoencephalopathy
	Cryptococcal infection

Overall score: **0%**

1 -



Question 21 of 155



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A CT scan is requested:



What is the most likely diagnosis?

	Cerebral toxoplasmosis
	Tuberculosis
	CMV encephalitis
	Progressive multifocal leukoencephalopathy
	Cryptococcal infection

Overall score: 0%

1 -

31



Question 21 of 155

□ □

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A CT scan is requested:



What is the most likely diagnosis?

	Cerebral toxoplasmosis
	Tuberculosis
	CMV encephalitis
	Progressive multifocal leukoencephalopathy
	Cryptococcal infection

Overall score: 0%

1 -



Question 22 of 155

□ □

A 57-year-old man who just returned from a cruise to the Bahamas comes to the emergency department with fever, non-productive cough and shortness of breath for the past 2 days. He has also had a headache, abdominal pain and diarrhoea since yesterday. The patient has a history of type 2 diabetes mellitus, and a smoking history of 20 pack-years. He does not use alcohol or illicit drugs. His temperature is 39.2°C, blood pressure is 110/65 mmHg, pulse is 80/min and respirations are 18/min. Pulse oximetry shows 97% on room air.

Lung examination demonstrates crackles bilaterally. The abdomen is soft and non-tender. The patient seems confused at times during the examination. His serum glucose is normal; serum sodium is 128 mmol/l. Chest x-ray demonstrates bilateral interstitial infiltrates. He is admitted to the ward.

Which of the following antibiotics should be given to this patient?

	Co-amoxiclav
	Ceftriaxone
	Clindamycin
	Levofloxacin
	Vancomycin

Dashboard

Overall score: 0%

1 -

Question 22 of 155

□ □

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	Clindamycin
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Dashboard

Overall score: 0%

1 -

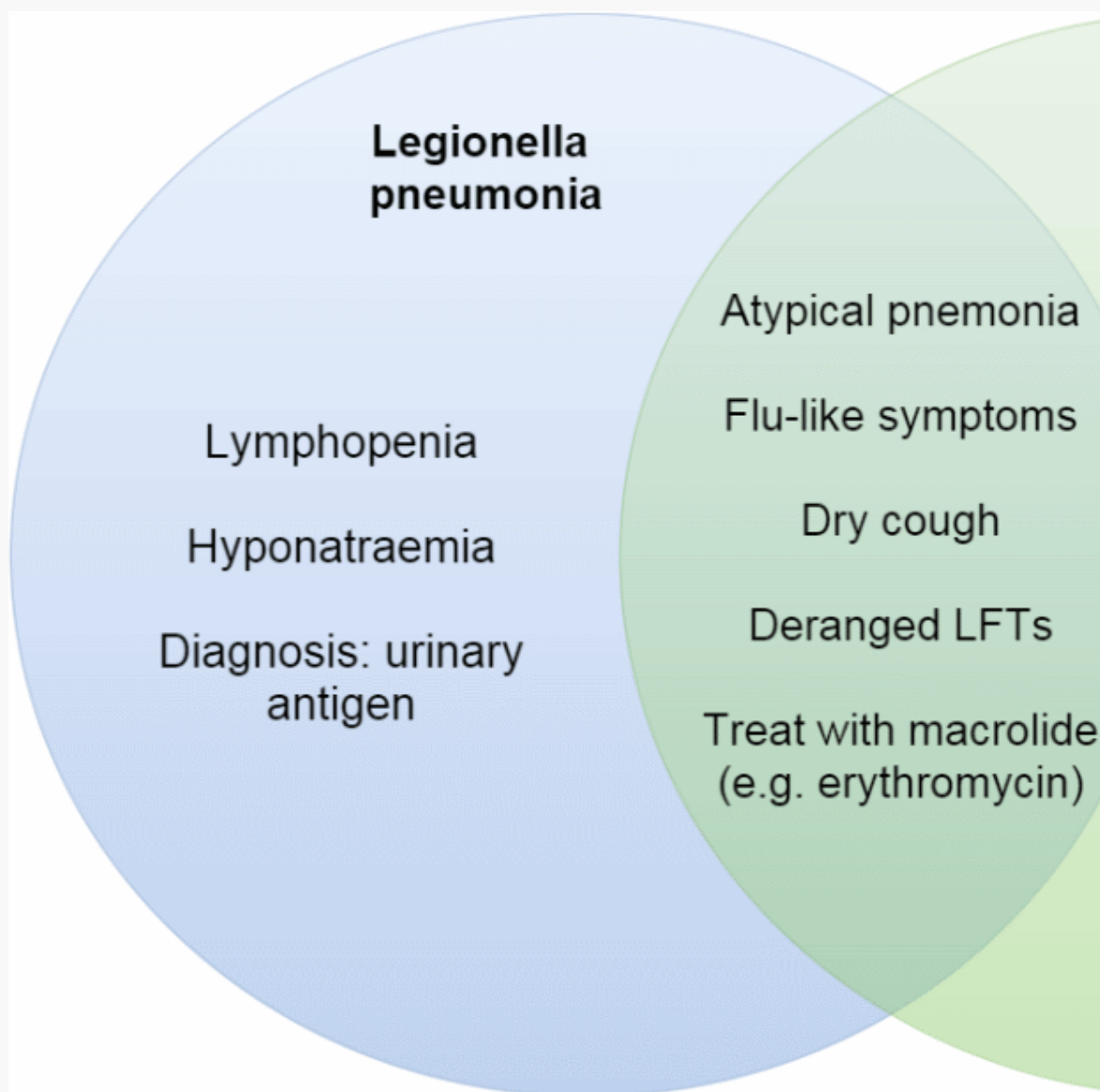
Question 22 of 155

A 57-year-old man who just had a productive cough and shortness of breath since yesterday. He has no fever, no diarrhoea since yesterday. He does not use alcohol or tobacco. His respiratory rate is 18/min. Pulse is 98/min.

Lung examination demonstrates hyperinflation. At times during the examination, there are bilateral interstitial infiltrates.

Which of the following antibiotics is most appropriate?

<input type="radio"/>	Co-amoxiclav
<input type="radio"/>	Ceftriaxone
<input type="radio"/>	Clindamycin
<input checked="" type="radio"/>	Levofloxacin
<input type="radio"/>	Vancomycin



Dashboard

Overall score: 0%

1 -

□ Question 22 of 155

□ □

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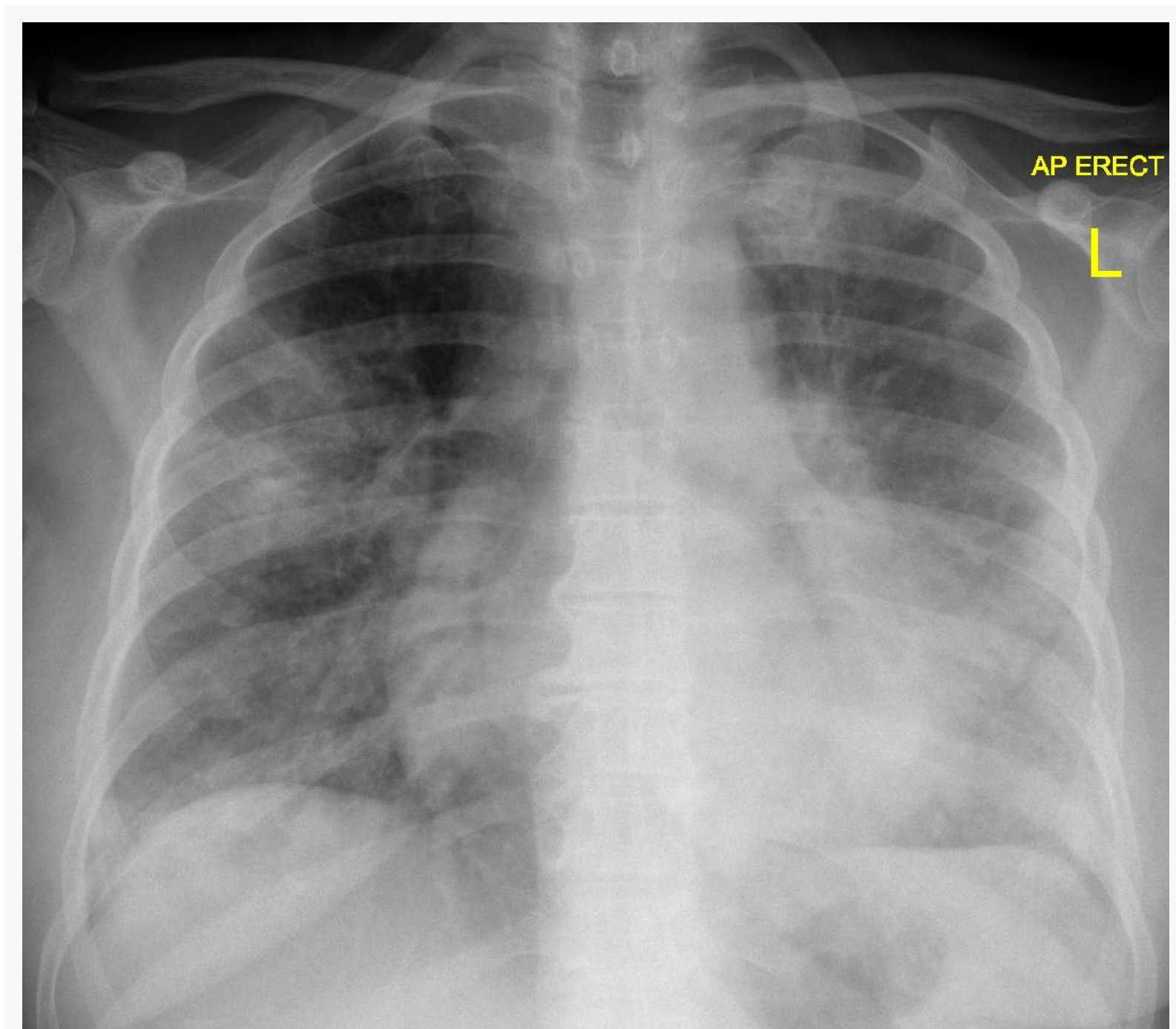
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	Ceftriaxone
	Clindamycin
	Levofloxacin
	Vancomycin

Dashboard

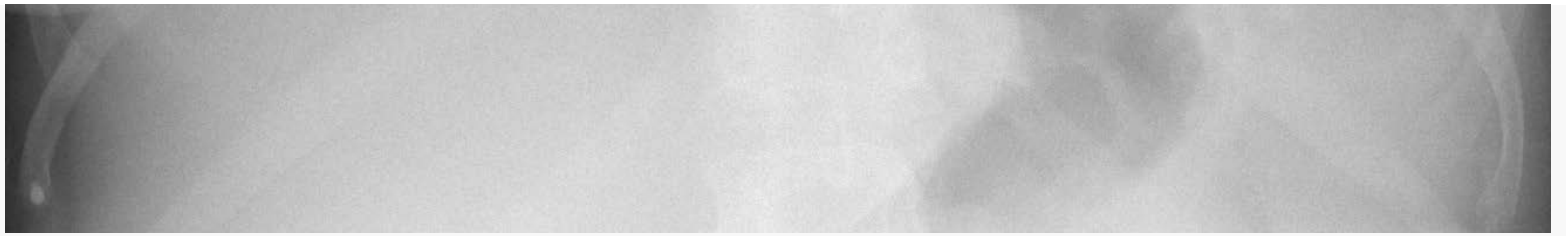
Overall score: 0%

1 -



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Question 23 of 155

□ □

A 98-year-old lady presents with a fever and confusion and on initial review is started on broad spectrum antibiotics. Despite five days of therapy, her temperature is 38.9°C and her clinical condition seems to have deteriorated. She has no relevant past medical history. The diagnosis of urinary tract infection (UTI) is confirmed when urine cultures confirm an extended spectrum B-lactamase (ESBL) producing *Escherichia coli* (E. coli).

Following the failure to respond to the first-line agent, which antibiotic is most likely to be effective?

	Trimethoprim
	Tetracycline
	Amoxicillin
	Cefalexin
	Ertapenem

Dashboard

Overall score: 0%

1 -

□ Question 23 of 155

□ □

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Dashboard

Overall score: 0%

1 -

□ Question 23 of 155

□ □

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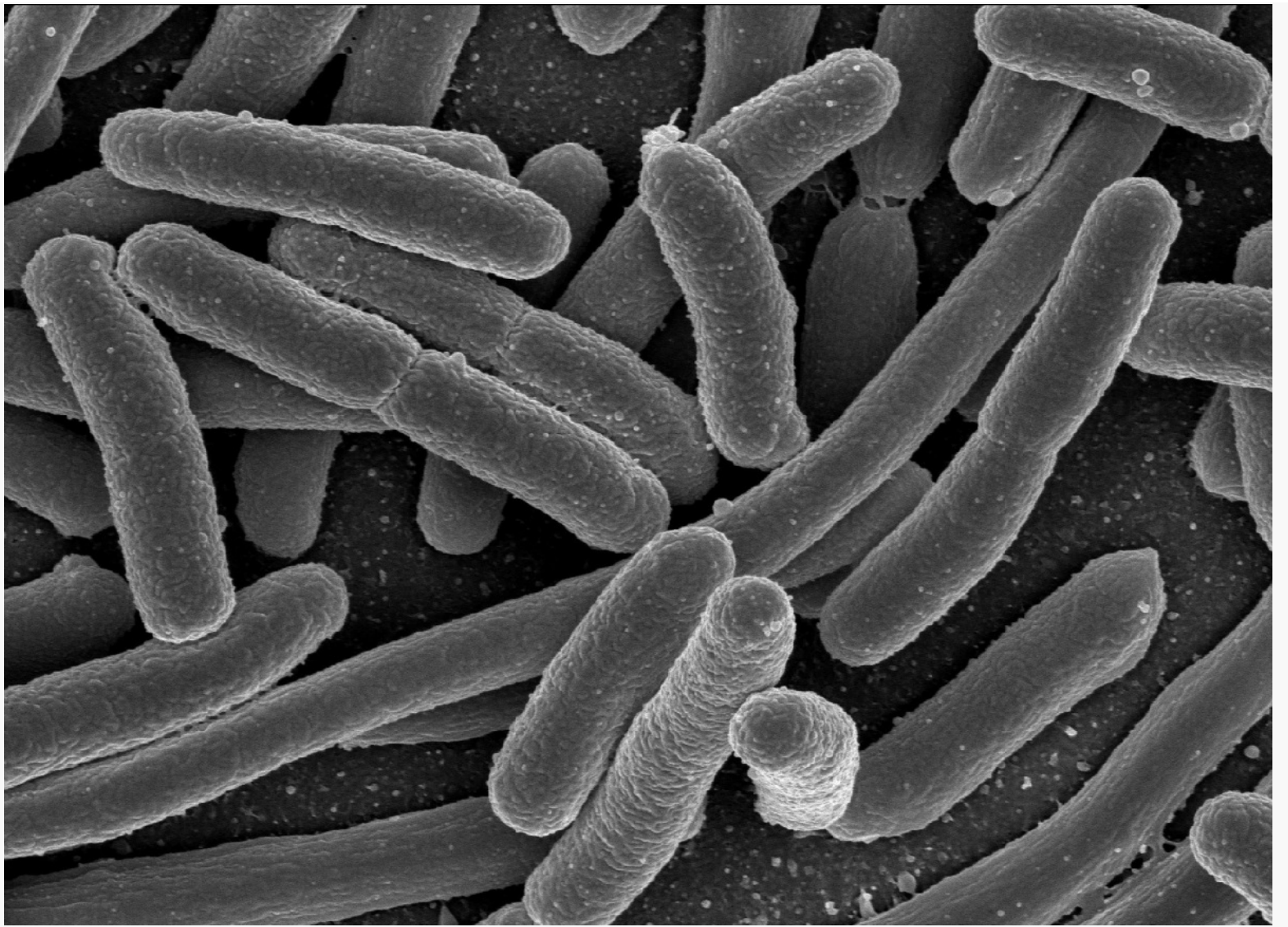
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	Trimethoprim
	Tetracycline
	Amoxicillin
	Cefalexin
	Ertapenem

Dashboard

Overall score: 0%

1 -



□ Question 24 of 155



A 36-year-old Sri-Lankan woman presents to the GP with a malar rash. On examination she has a erythematous rash that is warm to touch with some underlying oedema over both cheeks and the bridge of her nose.

She reports feeling low in energy over several months and describes a feeling of numbness in her feet and hands.

Investigations:

haemoglobin	125 g/L (115-165)
white cell count	9.4 × 10 ⁹ /L (4.0-11.0)
platelet count	220 × 10 ⁹ /L (150-400)
erythrocyte sedimentation rate	50 mm/1st h (<30)
serum urea	7.0 mmol/L (2.5-7.0)
serum creatinine	105 mol/L (60-110)
serum alanine aminotransferase	17 U/L (5-35)
serum aspartate aminotransferase	26 U/L (1-31)
serum complement C3	80 mg/dL (65-190)
serum complement C4	45 mg/dL (15-50)
serum C-reactive protein	145 mg/L (<10)
anti-double-stranded DNA antibodies	negative
c-ANCA	negative
p-ANCA	negative
antinuclear antibodies	1:20 (negative at 1:20 dilution)

An outpatient rheumatology appointment is arranged and she is started on a course of steroids in the interim. Her symptoms rapidly improve and the rash almost completely resolves however she is left with persistent numbness that appears to be worsening.

What is the most likely underlying diagnosis?

	Granuloma annulare
	Annular psoriasis
	Systemic lupus erythematosus
	Leprosy
	Cutaneous leishmaniasis

Dashboard

Overall score: 0%

1 -

□ Question 24 of 155



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	Granuloma annulare
	Annular psoriasis
	Systemic lupus erythematosus
	Leprosy
	Cutaneous leishmaniasis

Dashboard

Overall score: 0%
1 -

□ Question 25 of 155



A 35 year-old Brazilian accountant presented to the medical outpatient clinic with progressive leg swelling over the last 18 months. His mobility had become increasingly restricted due to both the swelling and shortness of breath on exertion. His father and paternal grandfather had both died from ischaemic heart disease in their 60s. His past medical history was unremarkable. He had smoked 15 cigarettes a day for 15 years and drank 15 units of alcohol per week.

On examination, his temperature was 36.5°C, blood pressure was 95/50 mmHg and heart rate was 75 beats per minute. His JVP was elevated to the angle of the jaw. His chest was clear on auscultation, but a third heart sound and pan-systolic murmur were audible on auscultation of the precordium. Bilateral pitting oedema to mid-thigh level was present.

Investigations:

Haemoglobin	131 g/L (130-180)
White cell count	6.9 x 10 ⁹ /L (4.0-11.0)
Neutrophil count	3.1 x 10 ⁹ /L (2.0-7.5)
Lymphocyte count	1.9 x 10 ⁹ /L (1.3-3.5)
Eosinophil count	1.1 X 10 ⁹ /L (0.1-0.4)
Platelets	260 x 10 ⁹ /L (150-400)

Sodium	132 mmol/L (135-145)
Potassium	3.6 mmol/L (3.5-5.0)
Urea	8.0 mmol/L (2.5-7.5)
Creatinine	101 mol/L (20-90)
Fasting plasma glucose	7.2 mmol/L (3.0-6.0)

Echocardiogram	Moderately impaired left ventricular systolic function Dilated left ventricle with moderate mitral regurgitation
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What is the most appropriate treatment for the underlying condition?

	Sulfadiazine and pyrimethamine
	Doxycycline
	Artesunate
	Benznidazole
	Mebendazole

Dashboard

Overall score: 0%

1 -

□ Question 25 of 155



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	Sulfadiazine and pyrimethamine
	Doxycycline
	Artesunate
	Benznidazole
	Mebendazole

Dashboard

Overall score: 0%

1 -

Question 26 of 155

□ □

A 65-year-old man has just returned from a trip to India one week ago. He has had bloody diarrhoea and fevers for the last two weeks and noted rose coloured spots on his abdomen yesterday. Apart from a prosthetic aortic valve, he has no significant past medical history. His blood tests indicate raised inflammatory markers and stool microbiology has found a gram-negative bacillus identified as a non-typhoidal *Salmonella*. Sensitivities are pending. Which one of the following options is best initial empiric management?

	Amoxicillin + clavulanic acid
	Gentamicin
	Ciprofloxacin
	Clindamycin
	Not for antibiotics

Dashboard

Overall score: 0%

1 -

□ Question 26 of 155

□ □

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	Amoxicillin + clavulanic acid
	Gentamicin
	Ciprofloxacin
	Clindamycin
	Not for antibiotics

Dashboard

Overall score: **0%****1** -

□ Question 27 of 155



A 50-year-old man presents to the Emergency Department after becoming increasingly unwell over the previous two weeks. His initial symptoms were fevers increasing shortness of breath. In the last 24 hours he had experienced several episodes of haemoptysis and bloody diarrhoea precipitating his attendance to hospital.

Past medical history included a diagnosis of systemic lupus erythematosus five years previously. This disease had been poorly controlled in recent months requiring the patient to take prednisolone 40 mg daily and hydroxychloroquine 400 mg daily. The patient was originally from Mali and had emigrated to the UK twenty years previously. He had returned to visit family in Africa earlier in the year and had not taken malaria prophylaxis whilst abroad.

Initial assessment revealed the patient to be very unwell. Respiratory rate was 32 with O₂ saturations of 94 % on high flow oxygen. Blood pressure was 80/50 mmHg with no improvement in hypotension following aggressive fluid resuscitation. The patient was intubated and ventilated and transferred to the Intensive Care Unit for inotropic support.

Results of immediate investigations are listed below.

Chest x-ray: widespread diffuse pulmonary infiltrates; left sided pleural effusion; no free air under the diaphragm

Abdominal x-ray: multiple loops of distended small bowel; no evidence of free air

Hb	11.2 g/dl
Mean cell volume	83 fL
Platelets	$150 \times 10^9/l$
WBC	$18.7 \times 10^9/l$
Neutrophils	$14.8 \times 10^9/l$
Lymphocytes	$2.0 \times 10^9/l$
Monocytes	$1.0 \times 10^9/l$
Eosinophils	$0.9 \times 10^9/l$
Blood film	no abnormality detected
Internationalised normalised ratio	1.2

Na ⁺	124 mmol/l
K ⁺	4.9 mmol/l
Urea	15 mmol/l
Creatinine	190 µmol/l
C-reactive protein	284 mg/dL

Blood cultures: Gram negative cocci (positive after 24 hours)

Pleural fluid microscopy: filariform larvae

What is the most likely underlying diagnosis?

<input type="radio"/>	Caecal carcinoma
<input type="radio"/>	Strongyloides hyperinfection syndrome
<input type="radio"/>	Churg-Strauss vasculitis
<input type="radio"/>	Plasmodium falciparum infection
<input type="radio"/>	Disseminated haematogenous tuberculosis

Dashboard

Overall score: **0%**

1 -

□ Question 27 of 155



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C-reactive protein	284 mg/dL

Blood cultures: Gram negative cocci (positive after 24 hours)

Pleural fluid microscopy: filariform larvae

What is the most likely underlying diagnosis?

	Caecal carcinoma
	Strongyloides hyperinfection syndrome
	Churg-Strauss vasculitis
	Plasmodium falciparum infection
	Disseminated haematogenous tuberculosis

Dashboard

Overall score: **0%**

1 -

Question 28 of 155



A 30-year-old male refugee presents with fever, rigours and right flank pain. With the help of a translator you discover he has been unwell for 7 days with these symptoms that are getting progressively worse. He says he is otherwise fit and well and does not take any regular medications. He moved to the UK 2 months ago having lived his entire life in Sudan.

On examination he has a temperature of 38.2 degrees, a heart rate of 98 beats per minute, a blood pressure of 110/70 and a respiratory rate of 20. He is lying calmly in the bed but is tender over the renal angle on the right side.

Investigations:

serum sodium	138 mmol/L (137-144)
serum potassium	5.5 mmol/L (3.5-4.9)
serum creatinine	240 mol/L (60-110)
haemoglobin	98 g/L (130-180)
white cell count	15.4 × 10 ⁹ /L (4.0-11.0)
eosinophil count	0.89 × 10 ⁹ /L (0.04-0.40)
platelet count	378 × 10 ⁹ /L (150-400)
urine microscopy	red cells 2+, white cells 3+, protein 2+
ultrasound scan of abdomen	right sided hydronephrosis and hydroureter, fibrotic and calcified bladder

What is the most likely underlying diagnosis?

	<i>Schistosomiasis japonicum</i>
	Chronic vesico-ureteric reflux and secondary pyelonephritis

	Squamous cell carcinoma of the bladder
	<i>Schistosomiasis haematobium</i>
	<i>Schistosomiasis mansoni</i>

Dashboard

Overall score: **0%**
1 -

Question 28 of 155



A 30-year-old male refugee presents with fever, rigours and right flank pain. With the help of a translator you discover he has been unwell for 7 days with these symptoms that are getting progressively worse. He says he is otherwise fit and well and does not take any regular medications. He moved to the UK 2 months ago having lived his entire life in Sudan.

On examination he has a temperature of 38.2 degrees, a heart rate of 98 beats per minute, a blood pressure of 110/70 and a respiratory rate of 20. He is lying calmly in the bed but is tender over the renal angle on the right side.

Investigations:

serum sodium	138 mmol/L (137-144)
serum potassium	5.5 mmol/L (3.5-4.9)
serum creatinine	240 mol/L (60-110)
haemoglobin	98 g/L (130-180)
white cell count	15.4 × 10 ⁹ /L (4.0-11.0)
eosinophil count	0.89 × 10 ⁹ /L (0.04-0.40)
platelet count	378 × 10 ⁹ /L (150-400)
urine microscopy	red cells 2+, white cells 3+, protein 2+
ultrasound scan of abdomen	right sided hydronephrosis and hydroureter, fibrotic and calcified bladder

What is the most likely underlying diagnosis?

	<i>Schistosomiasis japonicum</i>
	Chronic vesico-ureteric reflux and secondary pyelonephritis

	Squamous cell carcinoma of the bladder
	<i>Schistosomiasis haematobium</i>
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Dashboard

Overall score: **0%**
1 -

Question 29 of 155

□ □

A 19-year-old man returning from Zimbabwe is admitted to the emergency department. He arrived back in the UK one week ago but for the last three days has complained of a severe headache and rigors. He has no significant past medical history. He smokes 10 cigarettes per day and does not drink alcohol.

On examination, the patient is sweaty and appears anxious. Pulse rate is 108/min, blood pressure 91/58 mmHg, temperature 39°C and the respiratory rate 22/min. His chest is clear and heart sounds normal. A brief neurological examination is normal. An urgent blood film reveals malarial parasites. Which of the following would suggest severe malaria infection?

	Blood sugar > 14 mmol/l
	Bicarbonate < 14mmol/l
	CRP > 250 mg/l
	Temperature > 38.5°C
	Infection despite use of appropriate antimalarial prophylaxis

Dashboard

Overall score: 0%

1 -

□ Question 29 of 155

□ □

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	Temperature > 38.5°C
	Infection despite use of appropriate antimalarial prophylaxis

Dashboard

Overall score: 0%

1 -

Question 30 of 155

□ □

A 52-year-old gentleman presents with a lesion on his tongue. He has noticed feeling 'something odd' in his tongue and noticed a white rash on the side of the tongue which he is unable to wipe away. He has a past medical history of recurrent herpes simplex sores, HIV, hypertension and an ankle fracture requiring surgery. He takes only losartan. On examination, there is a thickly furrowed white lesion on the side of his tongue. What is the most appropriate treatment that would help resolve the lesion?

	Antifungal treatment
	Antiretroviral treatment
	Long-term antibiotics
	Oral steroids
	Surgical resection

Dashboard

Overall score: 0%

1 -

□ Question 30 of 155

□ □

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Dashboard

Overall score: **0%****1** -

Question 30 of 155

A 52-year-old gentleman presents with a lesion on his tongue. He has noticed a white rash on the side of the tongue which he is unsure if it is recurrent herpes simplex sores, HIV, hypertension and an anaemia. On examination, there is a thickly furrowed white lesion on the lateral border of the tongue. What would help resolve the lesion?



<input type="radio"/>	Antifungal treatment
<input checked="" type="radio"/>	Antiretroviral treatment
<input type="radio"/>	Long-term antibiotics
<input type="radio"/>	Oral steroids
<input type="radio"/>	Surgical resection

Dashboard

Overall score: **0%**

1 -

Question 30 of 155

A 52-year-old gentleman presents with a lesion on his tongue. He has noticed a white rash on the side of the tongue which has been present for several months. He has a history of recurrent herpes simplex sores, HIV, hypertension and is on antiretroviral therapy. On examination, there is a thickly furrowed white lesion on the lateral border of the tongue. What is the most likely diagnosis? What treatment would help resolve the lesion?

<input type="radio"/>	Antifungal treatment
<input checked="" type="radio"/>	Antiretroviral treatment
<input type="radio"/>	Long-term antibiotics
<input type="radio"/>	Oral steroids
<input type="radio"/>	Surgical resection



Dashboard

Overall score: **0%**

1 -

Question 30 of 155

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<input type="radio"/>	Antifungal treatment
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<input type="radio"/>	Long-term antibiotics
<input type="radio"/>	Oral steroids
<input type="radio"/>	Surgical resection

Dashboard

Overall score: **0%**

1 -

□ Question 31 of 155



A 44 year-old lady presented to the medical outpatient clinic with leg swelling which had progressively increased over the last 2 years. Her past medical history consisted only of a hospital admission for malaria as a child. She had grown up in urban Nigeria and moved to the United Kingdom 6 years ago to work as a teacher, but had been forced to stop working due to mobility problems. She was a non-smoker and did not drink alcohol.

On examination, her temperature was 36.5°C, heart rate 80 beats per minute, blood pressure 133/89 mmHg, respiratory rate 16 breaths per minute and oxygen saturations 98% on room air. Non-pitting leg swelling was apparent bilaterally extending proximally to the hips, with thickening of the overlying skin. Her chest was clear on auscultation and heart sounds were normal. The JVP was not elevated.

Investigations:

Haemoglobin	138 g/L
White cell count	$7.0 \times 10^9/l$
Neutrophil count	$4.8 \times 10^9/l$
Lymphocyte count	$2.0 \times 10^9/l$
Eosinophil count	$0.1 \times 10^9/l$
Platelets	$246 \times 10^9/l$

Sodium	142 mmol/L
Potassium	4.3 mmol/L
Urea	6.0 mmol/L
Creatinine	84 mol/L
Alkaline phosphatase	40 IU/L
Alanine aminotransferase	32 IU/L
Gamma-glutyl transferase	23 IU/L

Bilirubin	16 mol/L
Albumin	41 g/L
Fasting plasma glucose	5.3 mmol/L

What is the most likely causative organism?

	<i>Wuchereria bancrofti</i>
	<i>Brugia malayi</i>
	<i>Brugia timori</i>
	<i>Onchocerca volvulus</i>
	<i>Mansonella streptocerca</i>

Dashboard

Overall score: 0%

1 -

□ Question 31 of 155



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Dashboard

Overall score: **0%**

1 -

□ Question 32 of 155

□ □

A 38-year-old woman presents to her HIV clinic for her 6-monthly review having had her routine blood tests two weeks prior to her clinic visit. She has diagnosed with HIV seven years ago and has been stable on antiretroviral therapy since then. Her other medical problems include asthma which is well controlled. She reports generally good compliance with her medications but has unfortunately missed two of her treatment doses as she was on a weekend holiday and forgot to take her tablets with her. She feels well in herself.

Blood tests:

	Today	Two weeks ago	One year ago
HIV viral load	110 copies/ml	<50 copies/ml	<50 copies/ml
CD4 count	983 cells/mm ³	912 cells/mm ³	Not tested

How should she be further investigated?

	Urgent CD4 count
	Urgent viral resistance testing
	Urgent HIV-1 and HIV-2 serology
	Repeat viral load in one month
	Routine viral load and CD4 count in six months

Dashboard

Overall score: 0%

1 -

□ Question 32 of 155

□ □

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	Urgent HIV-1 and HIV-2 serology
	Repeat viral load in one month
	Routine viral load and CD4 count in six months

Dashboard

Overall score: **0%**

1 -

Question 32 of 155

A 38-year-old woman presents to her GP with a new rash prior to her clinic visit. She has diagnosed HIV 1 year ago. She then. Her other medical problems include hypertension. She takes her medications but has unfortunately run out of her tablets with her. She feels well.

Blood tests:

	Today	Two weeks ago
HIV viral load	110 copies/ml	<50 copies/ml
CD4 count	983 cells/mm ³	912 cells/mm ³

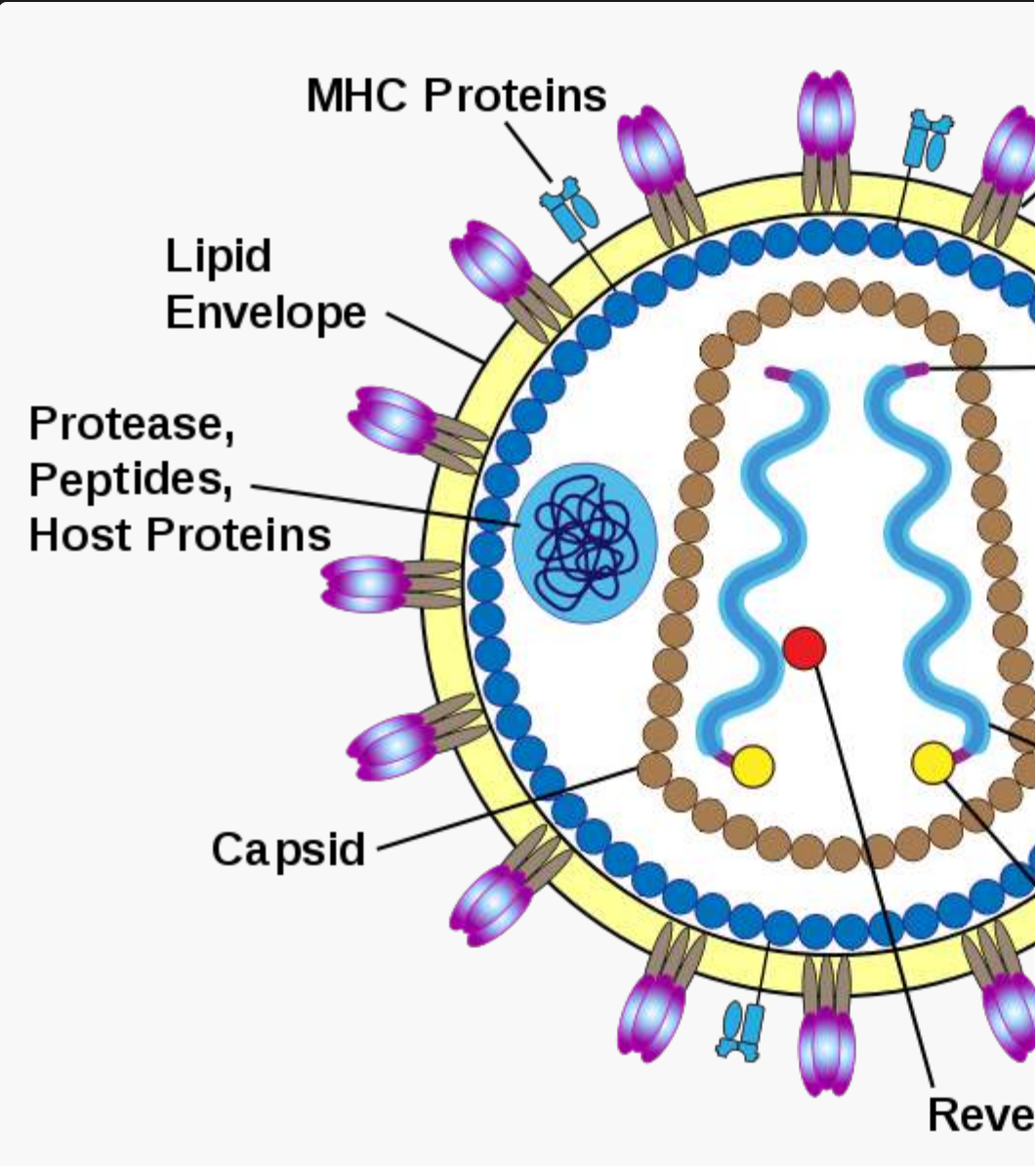
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Dashboard

Overall score: 0%

1 -



Question 32 of 155

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Blood tests:

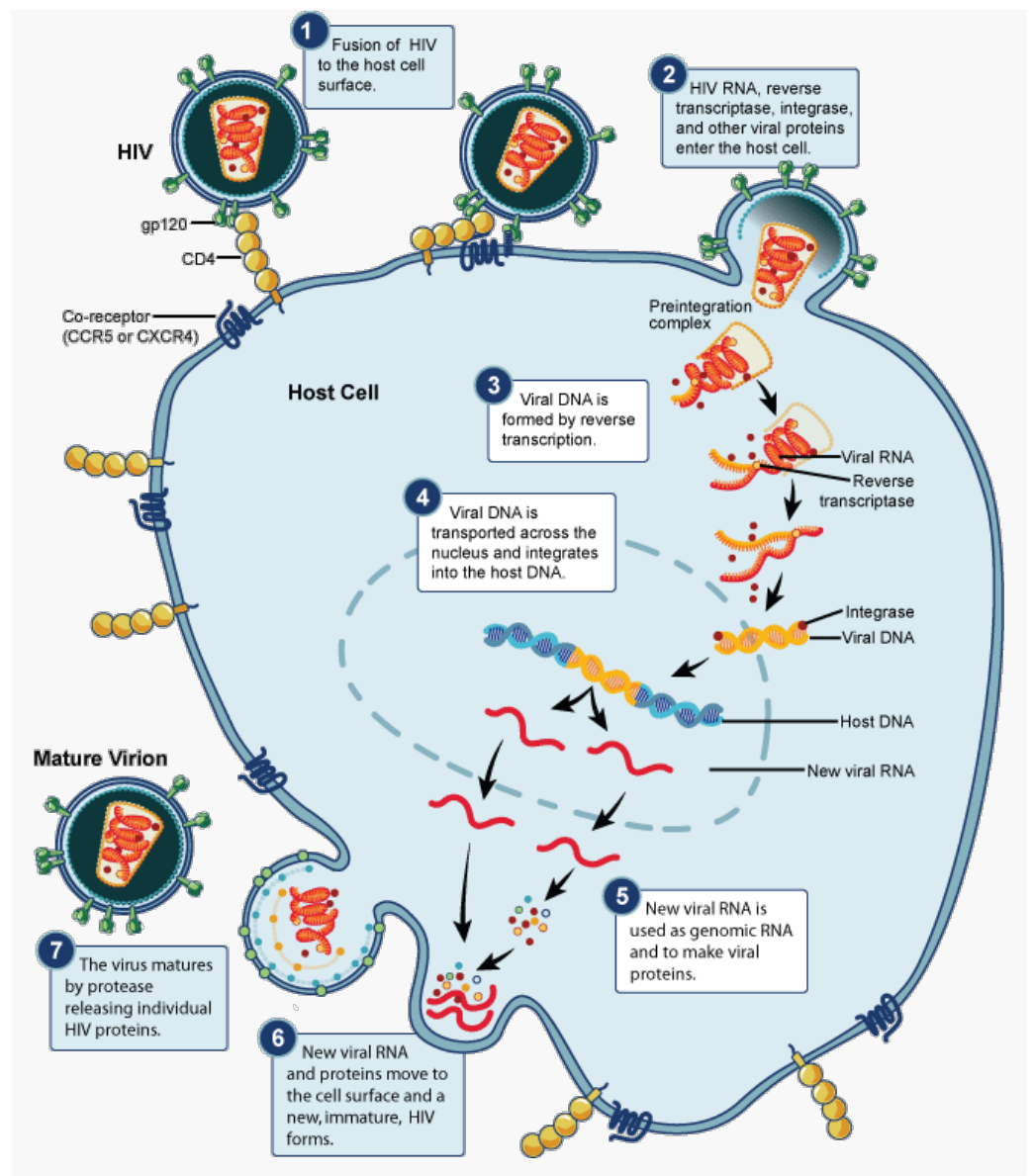
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How should she be further investigated?

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	Urgent HIV-1 and HIV-2 serology
	Repeat viral load in one month
	Routine viral load and CD4 count in six months

Dashboard

Overall score: 0%
1 -



□ Question 33 of 155



A 42-year-old woman presents to the emergency department with a dry cough. Over the last five days, she has been suffering from a worsening dry cough, shortness of breath that is worse on exertion, and she has felt hot. She has a past medical history of HIV which was recently diagnosed, but no other medical problems. She has been started two months ago on antiretroviral treatment and PCP prophylaxis, to which she reports good compliance.

Fundoscopy shows white branches alongside blood vessels. She denies any eye pain or change in her vision.

Observations:

Saturations	93%
Respiratory rate	20/min
Blood pressure	131/70mmHg
Heart rate	89/min
Temperature	38.1°C

Blood tests:

Hb	122 g/l
Platelets	401 * 10 ⁹ /l
WBC	10.2 * 10 ⁹ /l
Na ⁺	138 mmol/l
K ⁺	4.2 mmol/l
Urea	5.1 mmol/l
Creatinine	71 µmol/l
HIV viral load	12,198 copies/ml
CD4 count	70 cells/mm ³

A chest X-ray shows bilateral interstitial infiltrates. A broncho-alveolar lavage is organised but shows no organisms on microscopy, including with silver staining. PCR studies are pending.

What is the most appropriate treatment?

	Prednisolone
	Low-molecular weight heparin
	Tazocin
	IV co-trimoxazole
	Ganciclovir

Dashboard

Overall score: 0%

1 -

□ Question 33 of 155



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Dashboard

Overall score: **0%**
1 -

Question 33 of 155

A 42-year-old woman presents to the emergency department suffering from a worsening dry cough, shortness of breath, and a medical history of HIV which was recently diagnosed 6 months ago on antiretroviral treatment and PCP prophylaxis.

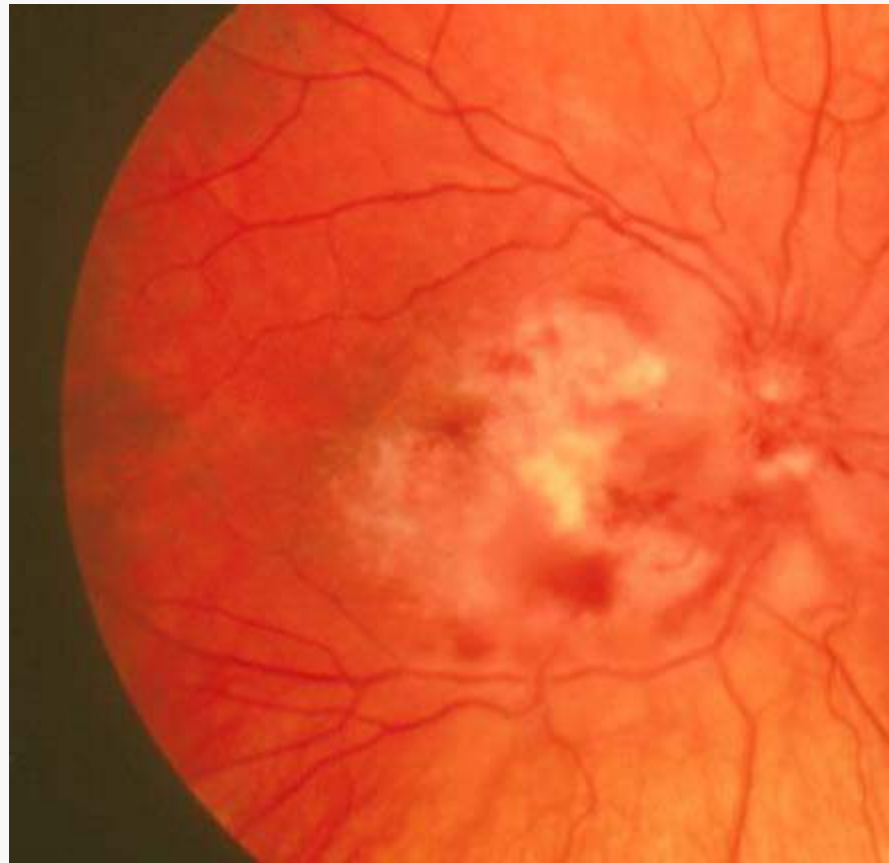
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Dashboard

Overall score: **0%**
1 -

□ Question 34 of 155



A 38 year old ex-intravenous drug user attends the GUM clinic for review. He describes a history of needle sharing in the past and is no longer abusing intravenous drugs. He also describes unprotected sexual intercourse with a number of partners who he no longer is in touch with, most recently 3 days prior to attending clinic. He has come to clinic after hearing a recent awareness campaign around the dangers of undiagnosed hepatitis C. He is currently well and cannot recall ever being jaundiced.

He has a wide range of investigations as detailed below.

Hepatitis B core antibody (HBcAb) - positive
Hepatitis C antibodies - positive
HIV antibody negative
p24 antigen negative

Further testing was carried out based on the results above

Hepatitis B surface antigen (HbsAg) negative
Hepatitis B surface antibody (HbsAb) positive
Hepatitis B envelope antigen (HbeAg) negative
Hepatitis C RNA - negative

What is the most accurate profile of the patient detailed above?

	HIV negative, Hepatitis B chronic carrier, Hepatitis C chronic infection
	HIV negative, Hepatitis B chronic carrier, Hepatitis C active infection
	HIV negative, Hepatitis B active infection, Hepatitis C spontaneously cleared
	HIV negative, Hepatitis B previous infection, Hepatitis C spontaneously cleared
	HIV negative, Hepatitis B previous infection, Hepatitis C chronic infection

Overall score: **0%**

1 -

□ Question 34 of 155



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	HIV negative, Hepatitis B previous infection, Hepatitis C spontaneously cleared
	HIV negative, Hepatitis B previous infection, Hepatitis C chronic infection

Dashboard

Overall score: **0%**

1 -

□ Question 35 of 155



A 27-year-old male presents with high-grade fever and vomiting for 8 days. He recently went to Africa for a jungle safari with a group of friends and began feeling unwell whilst he was there. During the trip, he spent most of the time camping outdoors. He does not have any history of fits or loss of consciousness, although he has been feeling drowsy and complains of generalised malaise. He also has pain in his wrist and shoulder joints but they are not swollen. He takes alcohol regularly and smokes cannabis socially.

On examination, he has a fever of 39°C and a pulse of 135bpm. His blood pressure is 100/70mmHg. He is icteric but does not have any flapping tremors. There is evidence of an enlarged spleen which is palpable 3 finger breadths below the left costal margin. The liver span is normal.

Lab reports reveal:

Hb	115 g/l
Platelets	100 * 10 ⁹ /l
WBC	9.5 * 10 ⁹ /l
Reticulocytes	5% (0.2 - 2%)

Na ⁺	140 mmol/l
K ⁺	4.6 mmol/l
Urea	5.1 mmol/l
Creatinine	83 µmol/l

Bilirubin	49 µmol/l
AST	50 u/l
ALT	25 u/l
Glucose	6.0 mmol/l

CT scan brain: Normal

CSF examination reveals:

Appearance	Clear
Protein	0.3 g/L (0.2 0.4 g/L)
Glucose	5.3 mmol/l
Lymphocytes	15/mm ³
Neutrophils	10

Which of the following is the most appropriate treatment option?

	Chloroquine
	Artemether/lumefantrine
	Primaquine
	IV acyclovir
	Co-trimoxazole

Dashboard

Overall score: 0%

1 -

□ Question 35 of 155



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Dashboard

Overall score: **0%**
1 -

Question 36 of 155

□ □

A 17 year old girl presents to A&E accompanied by her anxious mother. She was born in England, but both her parents were born in a rice growing community in rural China. She has recently returned from a holiday where she was visiting her family in China. They live on a farm where she had close contact with dogs, sheep and pigs. She arrived home one week ago. She was taking Mefloquine for malaria prophylaxis.

She was complaining of fever and a headache yesterday. Today she has been confused and disorientated.

She is previously fit and well, she has had all her immunisations according to the UK immunisation schedule, with normal growth and development. She does well at college and is a keen member of her college canoe club. She has no allergies.

On examination she is febrile at 38.9°C but haemodynamically stable. She appears confused and has an obvious difficulty walking. Examination of her cranial nerves is difficult but unremarkable. She has normal power and increased tone in her arms, which is more pronounced on the left side, with hyperreflexia bilaterally. She has several writhing involuntary movements of her upper limbs during the consultation.

A CT scan shows hypodensity in the thalami and basal ganglia bilaterally, more pronounced on the left side.

A lumbar puncture reveals a lymphocytic CSF with a raised protein.

What is the most likely diagnosis?

	Herpes Simplex Encephalitis
	Japanese Encephalitis
	Alcohol consumption
	Rabies
	Mefloquine toxicity

Overall score: **0%**

1 -

Question 36 of 155

□ □

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Dashboard

Overall score: **0%**

1 -

□ Question 37 of 155

□ □

A 22-year-old man presented to his General Practitioner with an itchy rash across his arms and legs. Symptoms had developed within the last few days and were causing the patient significant discomfort and preventing him from sleeping. The patient was a university student currently enjoying his summer vacation. He reported returning from a backpacking trip around Eastern Europe one week previously when he had stayed mostly in youth hostels. Since his return he had been staying in his parent's home. Interestingly, the patient had discovered on Facebook that a similar rash had afflicted a friend he had made at the end of his holiday.

He also worked part-time as a barman and denied coming into contact with any unusual chemicals at work. He had not recently introduced any new skin care products.

The patient had suffered from mild atopic eczema as an infant but had no recent skin complaints or other past medical history. He took no regular medications and had no known allergies. The patient smoked 10 cigarettes per day and drank roughly 40 units of alcohol each week.

On examination, the patient's arms and legs were covered with 2-5 mm maculopapular lesions with a central haemorrhagic punctum. In several places, several lesions were noted to be lying close together in a curve formation. There were minor marks of excoriation associated with the lesions. The patient's groin, abdomen, chest and back were free from rash. There was no axillary, cervical or inguinal lymphadenopathy.

What organism is the likely cause for the patient's rash?

	<i>Sarcoptes scabiei</i>
	<i>Leishmania donovani</i>
	<i>Ancylostoma braziliense</i>
	<i>Mycobacterium leprae</i>
	<i>Cimex hemipterus</i>

Overall score: **0%**

1 -

□ Question 37 of 155

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He also worked part-time as a barman and denied coming into contact with any unusual chemicals at work. He had not recently introduced any new skin care products.

The patient had suffered from mild atopic eczema as an infant but had no recent skin complaints or other past medical history. He took no regular medications and had no known allergies. The patient smoked 10 cigarettes per day and drank roughly 40 units of alcohol each week.

On examination, the patient's arms and legs were covered with 2-5 mm maculopapular lesions with a central haemorrhagic punctum. In several places, several lesions were noted to be lying close together in a curve formation. There were minor marks of excoriation associated with the lesions. The patient's groin, abdomen, chest and back were free from rash. There was no axillary, cervical or inguinal lymphadenopathy.

What organism is the likely cause for the patient's rash?

	<i>Sarcoptes scabiei</i>
	<i>Leishmania donovani</i>
	<i>Ancylostoma braziliense</i>
	<i>Mycobacterium leprae</i>
	<i>Cimex hemipterus</i>

Overall score: **0%**

1 -

Question 38 of 155



A 24 year-old student was referred to the Acute Medical Unit by his general practitioner with a 4-week history of increasing cough and breathlessness. The cough was generally non-productive but he had coughed up a small amount of blood on 3 occasions. His past medical history consisted only of asthma which was well controlled with a salbutamol inhaler. There was no family history of venous thromboembolism. His recent travel history included a trip to Sierra Leone 3 months ago. He was a non-smoker and drank 20 units of alcohol per week.

On examination, his temperature was 37.6oC, heart rate 80 beats per minute, blood pressure 124/88 mmHg, respiratory rate 22 breaths per minute and oxygen saturations 92% on room air. He was able to talk in full sentences. A few bibasal crackles were evident on auscultation of the chest. His JVP was not elevated and heart sounds were normal.

Investigations:

Haemoglobin	144 g/L (130-180)
White cell count	$7.0 \times 10^9/l$
Neutrophil count	$3.5 \times 10^9/l$
Lymphocyte count	$1.6 \times 10^9/l$
Eosinophil count	$1.3 \times 10^9/l$
Platelets	$330 \times 10^9/l$

Sodium	138 mmol/L
Potassium	3.9 mmol/L
Urea	7.0 mmol/L
Creatinine	65 mol/L
Alkaline phosphatase	40 IU/L
Alanine aminotransferase	33 IU/L
Gamma-glutyl transferase	18 IU/L

Bilirubin	14 mol/L
Albumin	40 g/L

Chest x-ray: Bilateral lower zone haziness
ECG: Normal sinus rhythm

What is the most appropriate treatment for the underlying condition?

	Mebendazole
	Low molecular weight heparin
	Fluconazole
	Doxycycline
	Artesunate

Dashboard

Overall score: 0%

1 -

Question 38 of 155



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	Mebendazole
	Low molecular weight heparin
	Fluconazole
	Doxycycline
	Artesunate

Dashboard

Overall score: **0%**
1 -

Question 39 of 155



A 48 year-old civil servant was referred to the Acute Medical Unit by his general practitioner with progressive cognitive impairment and severe lethargy over the last 3 weeks. He had also become intermittently agitated and his sleep was disturbed during the night. He had returned from visiting his partners relatives in Zimbabwe 1 month ago. He suffered from type II diabetes which was well controlled through dietary modification. He smoked 10 cigarettes a day and drank 14 units of alcohol per week.

On examination, his temperature was 37.2°C, pulse was 60 beats per minute and blood pressure was 134/88. His Glasgow Coma Score was 14/15 due to confused speech. His trachea was central and right-sided posterior cervical lymphadenopathy was present. His jugular venous pressure was not elevated and chest was clear on auscultation. Heart sounds were normal.

Investigations:

Haemoglobin	143 g/L (130-180)
White cell count	7.7 x 10 ⁹ /L (4.0-11.0)
Neutrophil count	3.0 x 10 ⁹ /L (2.0-7.5)
Lymphocyte count	1.8 x 10 ⁹ /L (1.3-3.5)
Eosinophil count	0.4 X 10 ⁹ /L (0.1-0.4)
Platelets	310 x 10 ⁹ /L (150-400)

Sodium	134 mmol/L (135-145)
Potassium	4.8 mmol/L (3.5-5.0)
Urea	9.0 mmol/L (2.5-7.5)
Creatinine	100 mol/L (25-95)
Fasting plasma glucose	4.4 mmol/L (3.0-6.0)

CT head	No abnormality detected
---------	-------------------------

What is the most appropriate next investigation?

	MRI brain
	Lymph node biopsy
	Lumbar puncture
	Stool microscopy
	Blood film

Dashboard

Overall score: **0%**

1 -

Question 39 of 155



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	MRI brain
	Lymph node biopsy
	Lumbar puncture
	Stool microscopy
	Blood film

Dashboard

Overall score: **0%**
1 -

Question 40 of 155

□ □

A 37-year-old man is referred to the medical outpatient clinic. He was born in Brazil but has been in the UK since university and now works in marketing.

He has been complaining of increasing breathlessness, worse on exertion, and is now breathless on climbing a flight of stairs. He has had several faints in the last few months, associated with feeling a 'funny' sensation in his chest, following which he blacks out. On one occasion he sustained a cut on his eye brow. There are no triggers to these episodes and there is a rapid recovery. He has never had any episodes of incontinence or tongue biting.

His past medical history is unremarkable. He was treated with several courses of antibiotics as a child in Brazil for an eye infection that persisted for several months. He has been seeing his GP for the past year for increasingly troublesome constipation. His medications are:

Senna 15mg at night
Movicol two sachets tds

On examination he has a displaced apex beat, normal heart sounds, and mild coarse crepitations at both lung bases.

What is the likely diagnosis?

	Chagas disease
	Endomyocardial fibrosis
	Churg Strauss Syndrome
	Hypertrophic Obstructive Cardiomyopathy
	Vasovagal syncope

Overall score: **0%**

1 -

Question 40 of 155

□ □

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	Endomyocardial fibrosis
	Churg Strauss Syndrome
	Hypertrophic Obstructive Cardiomyopathy
	Vasovagal syncope

Dashboard

Overall score: **0%**

1 -

Question 41 of 155

□ □

A 65 year-old gentleman with type 2 diabetes mellitus and alcoholism presents with fever, headache and neck stiffness. He has a history of previous anaphylactic reaction to penicillin.

On examination the temperature is 37.9°C, respiratory rate is 20 breaths/min and heart rate is 105 beats per minute. Nutritional state and dental hygiene is poor. The chest is clear to auscultation. The abdomen is soft and non-tender. The Glasgow coma scale score is 15, the patient is uncomfortable during pen-torch pupillary examination and neck flexion is limited by pain.

CSF examination reveals:

White Cells	560 per mm ³ (85% polymorphs)
Red cells	8 per mm ³
Protein	0.9g/L
Glucose	3.3mmol/L (serum glucose 9.2mmol/L)
Gram stain	Gram-negative coccobacilli

Which antimicrobial agent should be initiated?

	Vancomycin
	Ceftriaxone
	Chloramphenicol
	Rifampicin
	Gentamicin

Overall score: **0%**

1 -

Question 41 of 155

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Glucose	3.3mmol/L (serum glucose 9.2mmol/L)
Gram stain	Gram-negative coccobacilli

Which antimicrobial agent should be initiated?

<input type="radio"/>	Vancomycin
<input type="radio"/>	Ceftriaxone
<input checked="" type="radio"/>	Chloramphenicol
<input type="radio"/>	Rifampicin
<input type="radio"/>	Gentamicin

Overall score: **0%**

1 -

Question 42 of 155

□ □

A 35-year-old female returned from Tanzania 2 weeks ago. She had consulted her GP after feeling unwell over the previous 3 days with intermittent symptoms of fever, headache and generalised arthralgia. She had taken doxycycline as an antimalarial and denies missing any of the prescribed doses and had been fully vaccinated prior to her travel.

She is referred to the medical take where you retake the history. She admits to getting mosquito bites regularly whilst away, one of them she seemed to react severely to and this has left a mark on her shoulder.

On examination she appears drowsy, she has mild hepatosplenomegally and there is a well circumscribed, rubbery, painful, red lesion approximately 5cm in diameter above her left shoulder.

What is the likely diagnosis?

	<i>Plasmodium falciparum</i>
	<i>Trypanosomiasis brucei rhodesiensi</i>
	<i>Trypanosomiasis brucei cruzi</i>
	<i>Trypanosomiasis brucei gambiensi</i>
	<i>Toxoplasmosis</i>

Dashboard

Overall score: 0%

1 -

Question 42 of 155

□ □

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What is the likely diagnosis?

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	<i>Trypanosomiasis brucei gambiensi</i>
	<i>Toxoplasmosis</i>

Dashboard

Overall score: **0%**

1 -

Question 43 of 155

□ □

A 28-year-old patient has presented with upper limb weakness. He is extremely anxious and tells you that this morning he noticed that he had a dry mouth and found it difficult to swallow. His friends also commented that his voice sounded different to normal. Several hours later he began to notice weakness in both of his arms. He has not noticed any weakness in his lower limbs. He has no relevant past medical history or family history of note. He smokes 10 cigarettes a day, drinks approximately 30 units of alcohol per week and occasionally injects heroin.

His Glasgow Coma Score is 15/15. Neurological examination reveals power 3/5 in the upper limbs, 5/5 in the lower limbs. Biceps and supinator reflexes are absent. Knee and ankle reflexes are normal. His pupils are dilated and sluggish in reaction to light. He is unable to abduct either eye. You notice needle track marks on the patient's forearm and an erythematous wound in the patient's right antecubital fossa.

What is treatment would you give to the patient immediately?

<input type="checkbox"/>	IV Beta Interferon
<input type="checkbox"/>	IV immunoglobulin
<input type="checkbox"/>	Plasma exchange
<input type="checkbox"/>	Steroids
<input type="checkbox"/>	Trivalent antitoxin

Dashboard

Overall score: 0%

1 -

Question 43 of 155

□ □

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What is treatment would you give to the patient immediately?

	IV Beta Interferon
	IV immunoglobulin
	Plasma exchange
	Steroids
	Trivalent antitoxin

Dashboard

Overall score: **0%**

1 -

Question 44 of 155

□ □

A 27 week pregnant woman attends her GP with a 12 hour history of a rash. On examination, she has lesions consistent with a diagnosis of chickenpox. Her clinical observations are stable and she is otherwise well.

What would be the recommended management?

	No treatment needed
	Symptomatic treatment only (antihistamine & calamine lotion)
	Oral aciclovir
	Varicella-zoster immunoglobulin (VZIG)
	Oral aciclovir & VZIG

Dashboard

Overall score: 0%

1 -

Question 44 of 155

□ □

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	Oral aciclovir
	Varicella-zoster immunoglobulin (VZIG)
	Oral aciclovir & VZIG

Dashboard

Overall score: **0%**

1 -

Question 45 of 155

A 29-year-old man presents to his first HIV clinic appointment. He has routine three month HIV tests. He received contact tracing notification last week and was tested and found to be HIV positive. He has just started antiretroviral treatment.

At clinic he mentions that he is due to go to South Africa. He hasn't yet had his travel vaccinations and is worried about what affect the new diagnosis of HIV will have on his travel plans. He is aware that currently immunosuppressed and at risk of infections and is committed to taking his tablets.

Investigations:

Haemoglobin	113 g/L (130-180)
White cell count	6.5 10 ⁹ /L (4.0-11.0)
Neutrophil count	5.4 10 ⁹ /L (1.5-7.0)
Platelet count	170 10 ⁹ /L (150-400)
CD4 count	180 cells/mm ³ (600-1500)

Which of the following vaccinations is safe to be given?

<input type="checkbox"/>	Yellow fever
<input type="checkbox"/>	BCG
<input type="checkbox"/>	Oral polio
<input type="checkbox"/>	Meningococcal C
<input type="checkbox"/>	Varicella

Overall score: **0%**

1 -

Question 45 of 155

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CD4 count	180 cells/mm ³ (600-1500)

Which of the following vaccinations is safe to be given?

	Yellow fever
	BCG
	Oral polio
	Meningococcal C
	Varicella

Dashboard

Overall score: **0%**

1 -

□ Question 46 of 155

□ □

A 24 year old Caucasian girl returned from a two week scuba diving holiday in Honduras four days ago. She had not taken malaria prophylaxis. She had been drinking alcohol moderately during her trip. She had unprotected sex during her holiday with her diving instructor.

Yesterday she had felt hot and cold with pain all over her body and a headache. Today the pain is worst behind her eyes. It is a constant pain and there is no photophobia or neck stiffness. She has an erythematous rash over her trunk and back with patches of white skin surrounded by erythema. There is no lymphadenopathy

She is observed in hospital for 48 hours and tests for HIV (including PCR and antibody), malaria and blood cultures were negative. Further tests remain unreported.

She recovers and is feeling much better. Prior to discharge she asks if she is safe to go back to Honduras next year.

What should you advise?

	She should not go back to any Dengue endemic area as there is a risk of Dengue haemorrhagic fever (with a 20% mortality) with a second exposure to Dengue virus
	She can go back to Honduras, although there is a small risk of Dengue haemorrhagic fever with a second exposure, the risk is small enough not to be overly worried. She should take precautions not to be bitten by mosquitos during the day
	She has had Dengue fever so will be immune to Dengue fever on subsequent exposure.
	She has had flu and therefore she can go back to Honduras next year.
	Staying in the UK from now on would be the most sensible given that she is at high risk of malaria, HIV and Dengue fever from her behavioral tendencies.

Overall score: **0%**

1 -

Question 46 of 155

□ □

A 24 year old Caucasian girl returned from a two week scuba diving holiday in Honduras four days ago. She had not taken malaria prophylaxis. She had been drinking alcohol moderately during her trip. She had unprotected sex during her holiday with her diving instructor.

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	She has had flu and therefore she can go back to Honduras next year.
	Staying in the UK from now on would be the most sensible given that she is at high risk of malaria, HIV and Dengue fever from her behavioral tendencies.

Overall score: **0%**

1 -

□ Question 47 of 155



A 55-year-old woman is referred for an urgent assessment by the infectious diseases team after presenting to her local out of hours GP. The patient stated that she was concerned about having caught Lyme disease during a recent day out in the New Forest in Hampshire, UK. The patient was particularly concerned about this diagnosis as she had a close friend who had been forced to give up work after suffering from neuroborreliosis.

On closer questioning, the patient reported that 2 days previously she had gone on a walk in the New Forest. When she had arrived home that evening she had found two engorged ticks attached to her right lower leg. Her husband had removed the ticks by applying nail polish to them and then pulling them off with tweezers.

The patient denied suffering from any symptoms at the time of presentation though admitted she was very anxious. In particular, the patient had not experienced any neurological or cardiovascular symptoms and had not observed any skin rashes.

The patient was receiving treatment from her GP for hypercholesterolaemia and mild asthma. The patient had no known drug allergies and was employed as a legal secretary at a local firm.

A full examination of the patient's skin was performed and no abnormal rashes or other skin changes were identified. No focal neurology was identified on examination of the peripheral and central nervous systems. The assessment did not identify any signs of meningism. The patient was afebrile.

What is the appropriate management of this patient's tick bites?

	Treat with amoxicillin for 14 days
	Immediate serological testing for pathogenic <i>Borrelia</i> species
	Serological testing for pathogenic <i>Borrelia</i> species in 4 weeks (to allow for seroconversion)
	No investigation or treatment indicated at present time, carefully observe for onset of symptoms
	Treat with doxycycline for 14 days

Overall score: **0%**

1 -

□ Question 47 of 155



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	Immediate serological testing for pathogenic <i>Borrelia</i> species
	Serological testing for pathogenic <i>Borrelia</i> species in 4 weeks (to allow for seroconversion)
	No investigation or treatment indicated at present time, carefully observe for onset of symptoms
	Treat with doxycycline for 14 days

Dashboard

Overall score: **0%**

1 -

□ Question 48 of 155

□ □

An elderly gentleman presents with a three day history of bloody diarrhoea and feverishness. He has no significant travel history. His past medical history is listed as hypertension, osteoarthritis and gout. On examination his temperature is 38.0°C, heart rate 95/min, blood pressure 120/80 mmHg and his abdomen is soft and non-tender. A stool sample has grown *Salmonella*. What is the best treatment?

	Metronidazole
	Doxycycline
	Clarithromycin
	Ciprofloxacin
	Amoxicillin

Dashboard

Overall score: 0%

1 -

Question 48 of 155

An elderly gentleman presents with a three day history of bloody diarrhoea and feverishness. He has no significant travel history. His past medical history is listed as hypertension, osteoarthritis and gout. On examination his temperature is 38.0°C, heart rate 95/min, blood pressure 120/80 mmHg and his abdomen is soft and non-tender. A stool sample has grown *Salmonella*. What is the best treatment?

	Metronidazole
	Doxycycline
	Clarithromycin
	Ciprofloxacin
	Amoxicillin

Dashboard

Overall score: **0%**

1 -

□ Question 49 of 155



A 28-year-old female presents with a 4-day history of fevers and joint pain. She has recently returned from a 3 month gap year trip to the South-East Asia three days ago and reports no ill health during her travels. She has no past medical history, does not smoke, drinks minimal alcohol and denies the use of illicit drugs. During her travels, she reports two episodes of unprotected sexual contact with a non-regular partner. Although she knew she would be entering a malaria area and was indeed bitten by mosquitoes on a number of occasions, she did not take any malaria prophylaxis.

On examination, heart sounds and chest examination are both normal. A maculopapular rash is noted on her left thigh and right upper arm, with bilateral conjunctival injection. Abdominal examination reveals a soft abdomen with no masses. She has a significantly joint and muscle pains, limiting your neurological examination. She is alert and orientated to time and place, scoring 10/10 on abbreviated mental testing. Her blood tests are as follows:

Hb	109 g/l
Platelets	$45 \times 10^9/l$
WBC	$3.5 \times 10^9/l$

Na ⁺	137 mmol/l
K ⁺	3.8 mmol/l
Urea	7.1 mmol/l
Creatinine	100 μ mol/l
CRP	70 mg/l

Bilirubin	7 μ mol/l
ALP	30 u/l
ALT	162 u/l

Her first malaria film is negative and a chest radiograph is unremarkable.

What is the most likely diagnosis?

	Gonorrhoea with reactive arthritis
	HIV seroconversion
	Dengue fever
	Malaria falciparum
	Typhoid

Dashboard

Overall score: 0%

1 -

□ Question 49 of 155



A 28-year-old female presents with a 4-day history of fevers and joint pain. She has recently returned from a 3 month gap year trip to the South-East Asia three days ago and reports no ill health during her travels. She has no past medical history, does not smoke, drinks minimal alcohol and denies the use of illicit drugs. During her travels, she reports two episodes of unprotected sexual contact with a non-regular partner. Although she knew she would be entering a malaria area and was indeed bitten by mosquitoes on a number of occasions, she did not take any malaria prophylaxis.

On examination, heart sounds and chest examination are both normal. A maculopapular rash is noted on her left thigh and right upper arm, with bilateral conjunctival injection. Abdominal examination reveals a soft abdomen with no masses. She has a significantly joint and muscle pains, limiting your neurological examination. She is alert and orientated to time and place, scoring 10/10 on abbreviated mental testing. Her blood tests are as follows:

Hb	109 g/l
Platelets	$45 \times 10^9/l$
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Na ⁺	137 mmol/l
K ⁺	3.8 mmol/l
Urea	7.1 mmol/l
Creatinine	100 μ mol/l
CRP	70 mg/l

Bilirubin	7 μ mol/l
ALP	30 u/l
ALT	162 u/l

Her first malaria film is negative and a chest radiograph is unremarkable.

What is the most likely diagnosis?

	Gonorrhoea with reactive arthritis
	HIV seroconversion
	Dengue fever
	Malaria falciparum
	Typhoid

Dashboard

Overall score: 0%

1 -

Question 50 of 155

A 14 month-old Syrian girl is brought to the health centre by her mother. They are living in a Jordanian refugee camp after fleeing violence in their country. She has a widespread maculopapular rash that first affected the face before spreading to the torso and limbs. On examination, she has a cough, rhinorrhoea and conjunctivitis bilaterally. White spotting is seen on her buccal mucosa. The mother reports that her other children have had similar symptoms.

Which is the most appropriate therapy?

	Azithromycin
	Vitamin A
	Vitamin B1 (thiamine)
	Aciclovir
	Reassurance

Dashboard

Overall score: 0%

1 -

Question 50 of 155

□ □

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	Vitamin B1 (thiamine)
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Dashboard

Overall score: **0%**

1 -

Question 50 of 155

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Which is the most appropriate therapy?



	Azithromycin
	Vitamin A
	Vitamin B1 (thiamine)
	Aciclovir
	Reassurance

Dashboard

Overall score: **0%**

1 -

A 14 month-old Syrian girl is brought to the health centre by her mother after fleeing violence in their country. She has a widespread maculopurpuric rash spreading to the torso and limbs. On examination, she has a cough and petechial spotting is seen on her buccal mucosa. The mother reports that

	Azithromycin	
	Vitamin A	
	Vitamin B1 (thiamine)	
	Aciclovir	
	Reassurance	

Overall score: **0%**

1 -

□ Question 51 of 155



A 22-year-old man is brought to the emergency department after being granted asylum in the UK. Immigration officials had been concerned about the patient's well-being immediately on his arrival in the country. The patient reported feeling progressively more unwell over the previous 3 months after he had fled from his village in Syria. The primary symptoms reported by the patient were fevers, severe night sweats and profound fatigue. In addition, the patient had found that his exercise tolerance has greatly reduced in the previous four weeks and he became markedly breathless on minimal exertion.

The patient explained that he had experienced a prolonged period of inadequate food and shelter due to the war in his home country and while travelling across Europe. The patient had previously lived in a small village in Syria and had worked as a sheep farmer. Prior to fleeing his home the patient had regularly consumed food products made with unpasteurised sheep's milk. The patient had previously been in good physical health and had suffered no significant medical problems during his life.

On general examination, the patient appeared unwell and diaphoretic. The patient's sweat was noted to have an unusually unpleasant odour. Examination of the cardiovascular system identified multiple splinter haemorrhages under the patient's fingernails and toenails. Jugular venous pressure was elevated by 3-4 cm and pitting oedema was present to the patient's knees. A harsh systolic murmur was heard over the aortic area on auscultation. Bilateral basal crackles were heard on auscultation of the patient's lungs. The patient's spleen was palpable on examination of the abdominal system. No palpable lymphadenopathy was identified.

Please see the below table for results of initial investigations.

Haemoglobin	123 g / dL
Mean cell volume	80.3 fl
Lymphocytes	4.9×10^3 / microlitre (reference 1.5-4.0)
Platelets	109×10^3 / microlitre
Urea	8.9 mmol / L
Creatinine	126 micromols / L
Sodium	137 mmol / L

Potassium	4.1 mmol / L
Erythrocyte sedimentation rate	102 mm / h (reference 0-35)
C-reactive protein	99 mg / L (reference < 7)
Urinalysis	Positive for blood + + +
Chest x-ray	Upper lobe blood diversion; generalised patchy airspace shadowing; bilateral shallow pleural effusions
ECG	Sinus rhythm; borderline right bundle branch block
Focused bedside transthoracic echocardiogram	0.6 cm vegetation on aortic valve; evidence of moderate-severe aortic stenosis; ejection fraction 30 %

Which of the following organisms is the most likely cause of the patient's presentation?

<input type="radio"/>	<i>Clostridium burnetti</i>
<input type="radio"/>	<i>Bartonella quintana</i>
<input type="radio"/>	<i>Haemophilus parainfluenzae</i>
<input type="radio"/>	<i>Kingella kingae</i>
<input type="radio"/>	<i>Brucella melitensis</i>

Dashboard

Overall score: **0%**

1 -

□ Question 51 of 155



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Please see the below table for results of initial investigations.

Haemoglobin	123 g / dL
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	<i>Bartonella quintana</i>
	<i>Haemophilus parainfluenzae</i>
	<i>Kingella kingae</i>
	<i>Brucella melitensis</i>

Dashboard
Overall score: 0% 1 -

□ Question 52 of 155



A 55 year old man attended his General Practitioner to complain of on-going fatigue and lethargy over recent months. He reported experiencing recurrent minor infections meaning that he had rarely been feeling well for any significant length of time. His GP records supported this story with the patient having been prescribed courses of antibiotics for a leg cellulitis, suppurative otitis media and sinusitis (twice) over the past 9 months. The patient reported a good appetite and no recent weight loss, fevers or night sweats. He denied any symptoms of arthritis, skin rashes, photophobia or dry eyes. There were no significant gastrointestinal or genitourinary symptoms.

Past medical history included obesity, hypertension, impaired fasting glucose tolerance and osteoarthritis of the knees. Drug therapy included ramipril 2.5 mg daily, bendroflumethiazide 2.5 mg daily and paracetamol as required. The patient was divorced with two grown up children. He was an ex-smoker who rarely drank alcohol. The patient had recently retired having previously worked as a salesperson for luxury yachts, an occupation that had involved extensive travel around the world.

On examination, the patient was significantly overweight (BMI 36 kg / m²). Abdominal examination did not demonstrate any jaundice or signs of chronic liver disease and no lymphadenopathy. Cardiovascular, respiratory and musculoskeletal examination was unremarkable. Given the patients concerns, his General Practitioner arranged some basic blood tests.

Haemoglobin	16.0 g / dL
Mean cell volume	85 fL
White cell count	5.2 * 10 ⁹ /l
Neutrophils	4.2 * 10 ⁹ /l
Lymphocytes	0.6 * 10 ⁹ /l
Monocytes	0.1 * 10 ⁹ /l
Eosinophils	0.1 * 10 ⁹ /l
Basophils	0.2 * 10 ⁹ /l
Platelets	358 * 10 ⁹ /l
Urea	6.8 mmol / L

Creatinine	110 micromol / L
Sodium	141 mmol / L
Potassium	3.9 mmol / L
Albumin	34 g / L (reference 35-50)
Alkaline phosphatase	98 U / L (reference (35-100)
ALT	28 U / L (reference 3-36)
Bilirubin	21 micromol / L (reference < 26)
Total protein	85 g / L (reference 60-80)
B12	355 pmol / L (reference 74-516)
Folate	30 nmol / L (reference 7-36)
Serum immunoglobulins	Normal electrophoresis strip

Comparison with a routine blood test taken 6 months previously had shown a similar full blood count differential.

What is the most appropriate next line investigation?

<input type="checkbox"/>	Human immunodeficiency virus antibody testing
<input type="checkbox"/>	Anti-nuclear antibody
<input type="checkbox"/>	Rheumatoid factor
<input type="checkbox"/>	Epstein-Barr virus serology
<input type="checkbox"/>	Serum angiotensin-converting enzyme

Dashboard

Overall score: **0%**

1 -

□ Question 52 of 155



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Comparison with a routine blood test taken 6 months previously had shown a similar full blood count differential.

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	Human immunodeficiency virus antibody testing
	Anti-nuclear antibody
	Rheumatoid factor
	Epstein-Barr virus serology
	Serum angiotensin-converting enzyme

Dashboard

Overall score: **0%**

1 -

Question 53 of 155

You see a 26-year-old Caucasian man with poorly controlled HIV (recent CD4 count of 113 cells/mm³) with a negative Mantoux test. He was routinely tested after his father (whom he lives with) was diagnosed with active pulmonary disease, but himself shows no features of active disease. On examination, his chest is clear with no overt lymphadenopathy. Blood pressure is 132/91 mmHg, heart rate 85 beats per minute, respiratory rate 14 breaths per minute, oxygen saturation 96% on air and temperature 36.8°C.

What is the next step?

	5 days oral ciprofloxacin
	QuantiFERON-TB (interferon gamma assay)
	Induced sputum for AAFB
	Monitor and repeat Mantoux in 2 weeks
	Rifampicin and isoniazide for 6 months with pyrazinamide and ethambutol for 2 months

Dashboard

Overall score: 0%

1 -

Question 53 of 155

□ □

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1 -

□ Question 53 of 155

□ □

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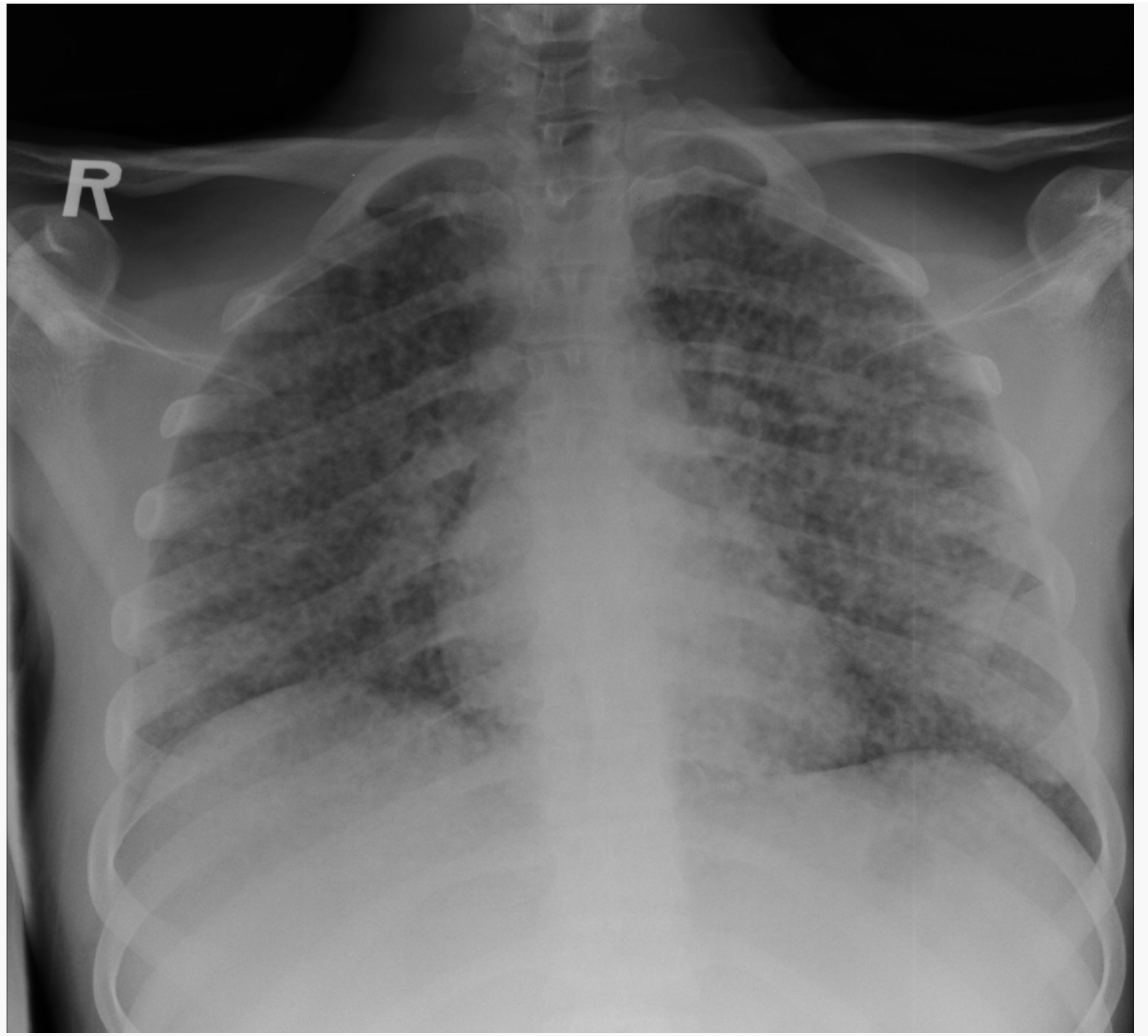
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	Induced sputum for AAFB
	Monitor and repeat Mantoux in 2 weeks
	Rifampicin and isoniazide for 6 months with pyrazinamide and ethambutol for 2 months

Dashboard

Overall score: **0%**

1 -

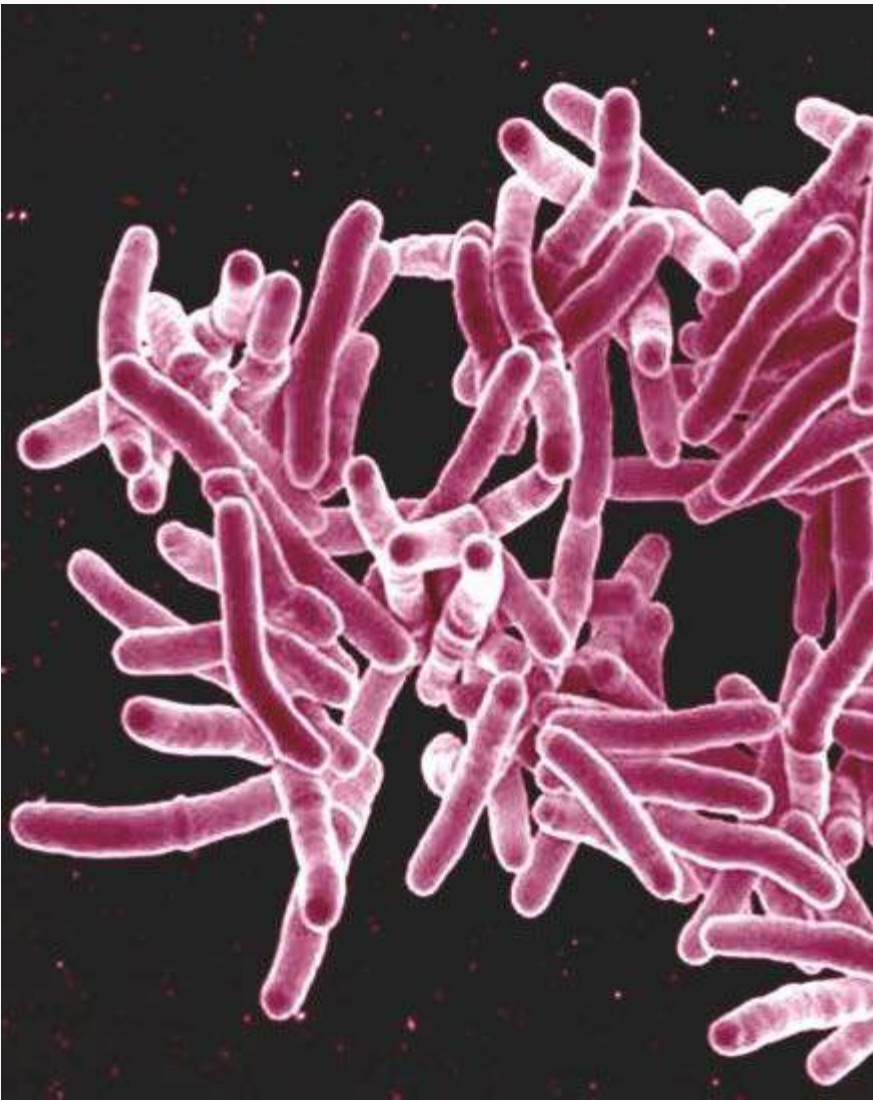


Question 53 of 155

You see a 26-year-old Caucasian man with poorly controlled tuberculosis. He was routinely tested after his father's disease, but himself shows no features of active disease. Lymphadenopathy. Blood pressure is 132/91 mmHg, heart rate 72 bpm, oxygen saturation 96% on air and temperature 37.2°C.

What is the next step?

	5 days oral ciprofloxacin
	QuantiFERON-TB (interferon gamma assay)
	Induced sputum for AAFB
	Monitor and repeat Mantoux in 2 weeks
	Rifampicin and isoniazide for 6 months with pyrazinamide and ethambutol for 2 months



Dashboard

Overall score: 0%

1 -

□ Question 54 of 155



A 40-year-old gentleman was admitted with fever, dry cough, headache, abdominal pain and diarrhoea. Around ten days previously he had been complaining of intermittent fevers and night sweats but otherwise felt well. In the last 3 days, he had developed generalised abdominal pain and watery diarrhoea, along with a dry cough and headache. Prior to this he had felt constipated only having opened his bowels once in three days which he thought was unusual as he had eaten a large amount of fruit off the market stools in South Korea where he had recently been on a business trip.

On examination, he was notably jaundiced, had a macular rash over his chest and had tender hepatomegaly. Observations revealed a temperature of 40.1°C, heart rate 38/min, regular and a blood pressure of 130/90 mmHg. ECG showed a sinus bradycardia.

Blood tests revealed:

WBC	14.0 * 10 ⁹ /l
Neutrophils	12.0 * 10 ⁹ /l
CRP	230 mg/l
Bilirubin	52 µmol/l
ALP	80 u/l
ALT	200 u/l
Albumin	32 g/l

What investigation would you do to obtain the diagnosis?

	Blood cultures
	Abdominal ultrasound
	HIV test
	Lumbar puncture

	ECG
--	-----

Dashboard

Overall score: **0%**

1 -

□ Question 54 of 155



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On examination, he was notably jaundiced, had a macular rash over his chest and had tender hepatomegaly. Observations revealed a temperature of 40.1°C, heart rate 38/min, regular and a blood pressure of 130/90 mmHg. ECG showed a sinus bradycardia.

Blood tests revealed:

WBC	14.0 * 10 ⁹ /l
Neutrophils	12.0 * 10 ⁹ /l
CRP	230 mg/l
Bilirubin	52 µmol/l
ALP	80 u/l
ALT	200 u/l
Albumin	32 g/l

What investigation would you do to obtain the diagnosis?

	Blood cultures
	Abdominal ultrasound
	HIV test
	Lumbar puncture

	ECG
--	-----

Dashboard

Overall score: **0%**
1 -

Question 55 of 155

□ □

A 25-year-old man reports feeling unwell with fever, generalised muscle aches, headache and widespread rash 1 week after returning from Thailand. On admission his chest X-ray is unremarkable. His urine dip showed 1+ protein only and viral swabs are negative. Bloods are also normal aside from low platelet count. On day 2 of admission his blood pressure drops and repeat bloods show a further fall in platelets and reduction in haemoglobin count. What is the most likely diagnosis?

	Measles
	Malaria
	Dengue fever
	Gonococcal septicaemia
	Herpes simplex encephalitis

Dashboard

Overall score: 0%

1 -

Question 55 of 155

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<input checked="" type="radio"/>	Dengue fever
<input type="radio"/>	Gonococcal septicaemia
<input type="radio"/>	Herpes simplex encephalitis

Dashboard

Overall score: **0%**

1 -

Question 56 of 155

□ □

A 70-year-old female was admitted to the emergency department from a nursing home due to a progressive decline in her level of consciousness over the past two days. Her carer mentioned that she had been complaining of a burning sensation while urinating associated with a low-grade fever for the last week. Blood investigations showed:

Na ⁺	130 mmol/l
K ⁺	3.6 mmol/l
Urea	13 mmol/l
Creatinine	130 µmol/l

Urine dipstick showed increase leukocytes and nitrites. Urine culture showed a growth of extended-spectrum B-lactamase (ESBL) - producing *Escherichia coli*.

What is the first line treatment?

	Ciprofloxacin
	Ceftriaxone
	Meropenem
	Methoprim
	Aztreonam

Dashboard

Overall score: 0%

1 -

□ Question 56 of 155

□ □

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	Ceftriaxone
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	Methoprim
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Dashboard

Overall score: 0%

1 -

□ Question 56 of 155

□ □

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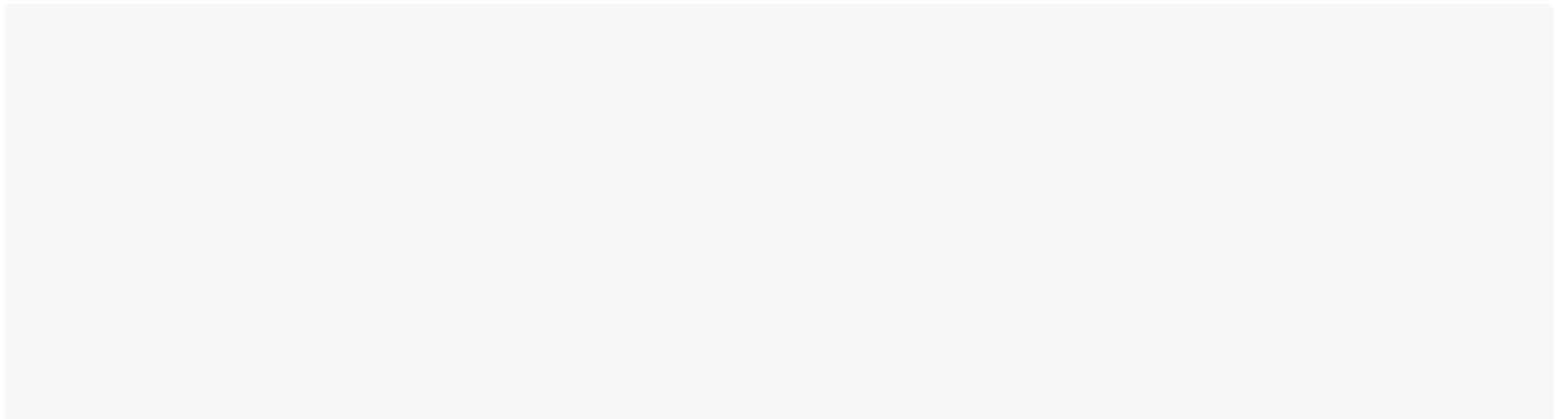
What is the first line treatment?

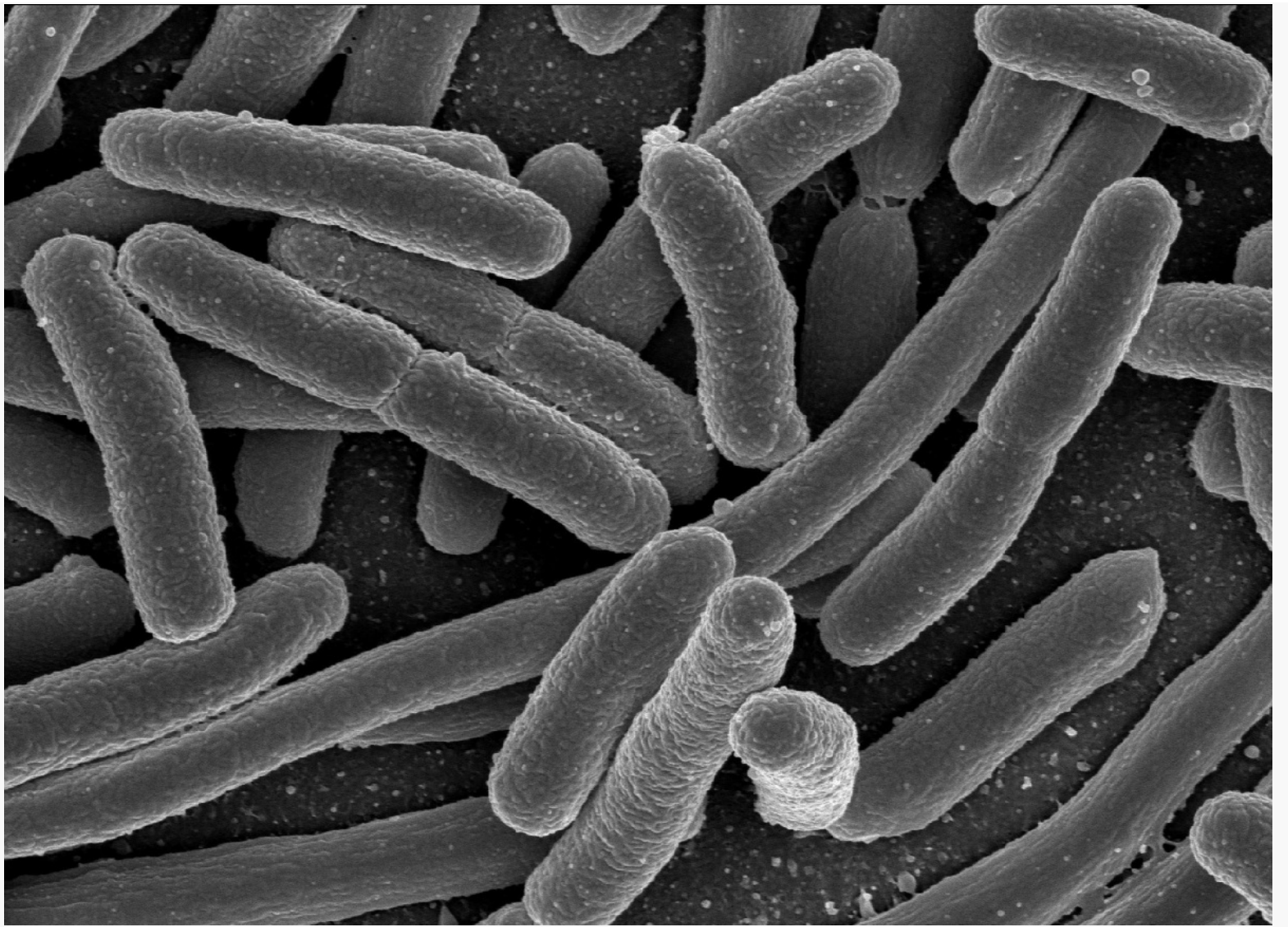
	Ciprofloxacin
	Ceftriaxone
	Meropenem
	Methoprim
	Aztreonam

Dashboard

Overall score: 0%

1 -





Question 57 of 155

□ □

A 20-year-old woman who is 16 weeks pregnant presents with pain passing urine and an irritating rash. On examination, she has a tender, red, vesicular rash on her vulva. A urine dipstick shows both blood and white cells. What is the best treatment?

	Clotrimazole
	Cefalexin
	Oral aciclovir
	Topical aciclovir
	Fluconazole

Dashboard

Overall score: 0%

1 -

Question 57 of 155

A 20-year-old woman who is 16 weeks pregnant presents with pain passing urine and an irritating rash. On examination, she has a tender, red, vesicular rash on her vulva. A urine dipstick shows both blood and white cells. What is the best treatment?

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	Cefalexin
	Oral aciclovir
	Topical aciclovir
	Fluconazole

Dashboard

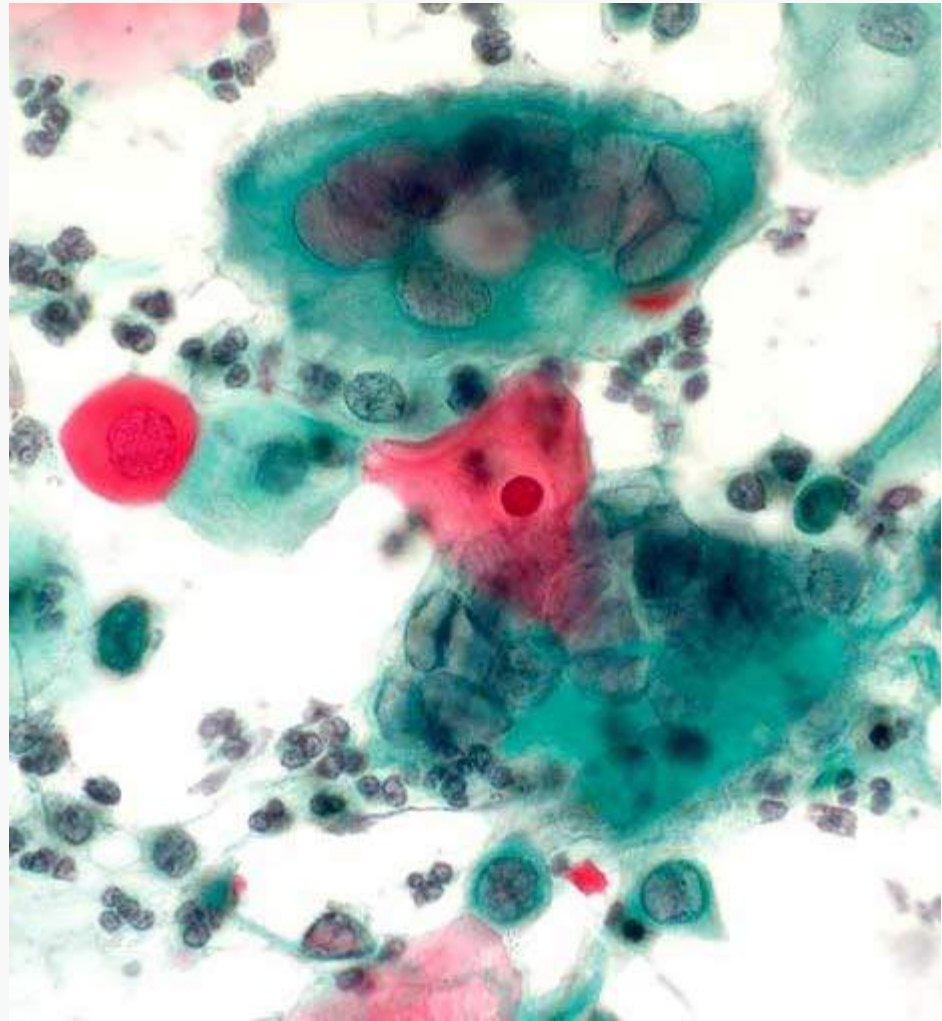
Overall score: **0%**

1 -

Question 57 of 155

A 20-year-old woman who is 16 weeks pregnant has a tender, red, vesicular rash on her vulva. What is the most appropriate treatment?

<input type="radio"/>	Clotrimazole
<input type="radio"/>	Cefalexin
<input checked="" type="radio"/>	Oral aciclovir
<input type="radio"/>	Topical aciclovir
<input type="radio"/>	Fluconazole



Dashboard

Overall score: **0%**

1 -

□ Question 57 of 155

□ □

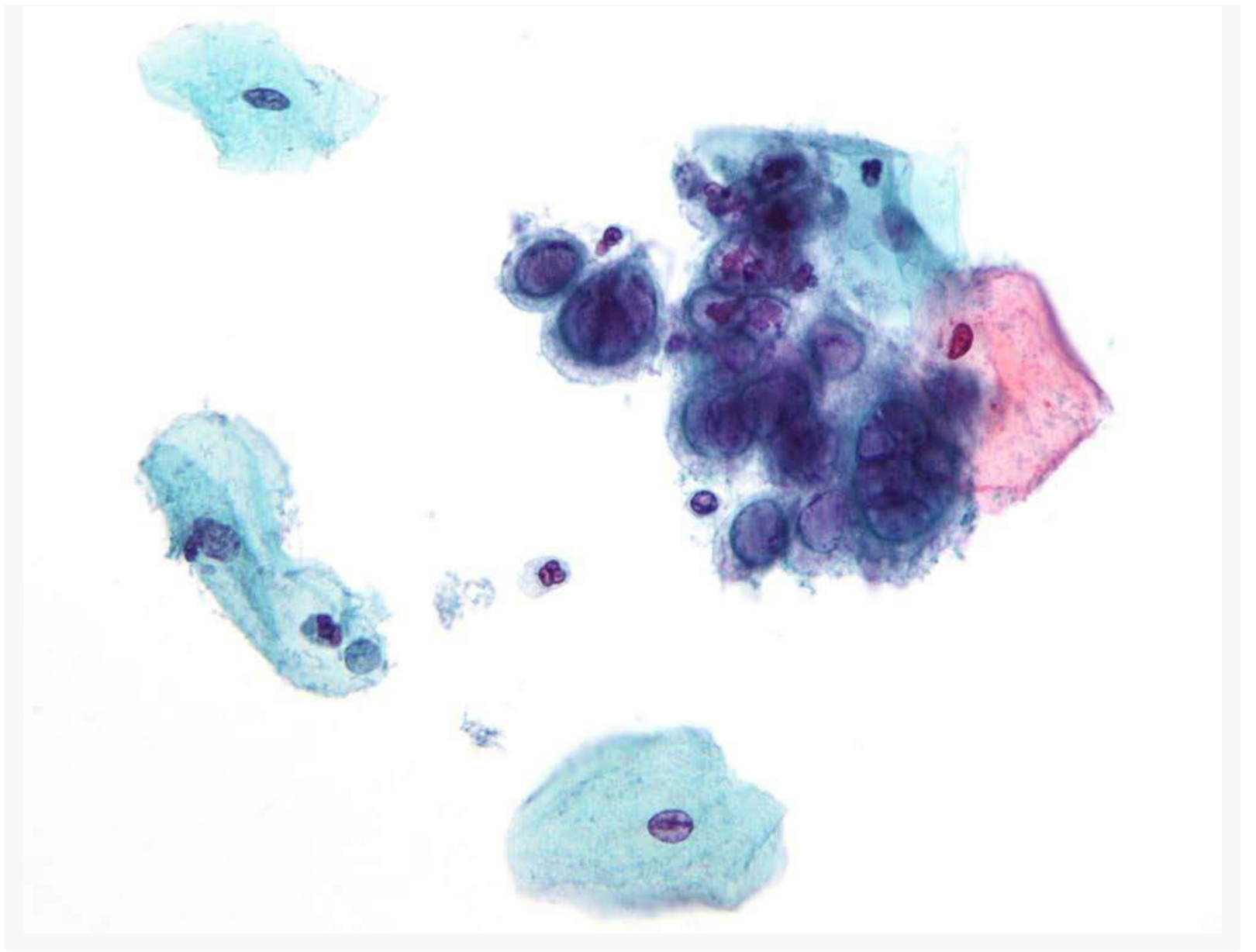
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	Clotrimazole
	Cefalexin
	Oral aciclovir
	Topical aciclovir
	Fluconazole

Dashboard

Overall score: 0%

1 -



Question 58 of 155

□ □

A 38 year old man from Nigerian man presents to a gastroenterology clinic. He is a businessman, working for an iron and steel trading company and makes regular trips to Swaziland to visit mining executives.

For the previous four months he has been troubled by diarrhoea, up to 8 episodes a day, with abdominal bloating and cramping. There is no blood visible in the stool. He has previously been treated for tuberculosis as a child.

A stool sample is sent to the lab, and Modified Ziehl-Neelson stain reveals multiple red staining round objects measuring 5 microns in diameter.

What will be the most appropriate treatment?

	Highly active anti-retroviral therapy
	Co-trimoxazole
	Rifampicin, isoniazid, ethambutol, pyrazinamide
	Metronidazole
	Ciprofloxacin

Dashboard

Overall score: 0%

1 -

Question 58 of 155

□ □

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What will be the most appropriate treatment?

	Highly active anti-retroviral therapy
	Co-trimoxazole
	Rifampicin, isoniazid, ethambutol, pyrazinamide
	Metronidazole
	Ciprofloxacin

Dashboard

Overall score: **0%**

1 -

Question 59 of 155



A 35-year-old man is brought into the Emergency Department after 3 successive tonic-clonic seizures. He was given 10mg of rectal diazepam and has since stabilised.

A brief history from his girlfriend states that he was usually fit and well apparent from recurrent sinusitis. Over the past month, however, he had been complaining of increasing headaches and had received a course of antibiotics from his GP.

He takes no regular medication but his partner states that they do occasionally take ecstasy whilst on nights out.

On examination, he is drowsy with a Glasgow Coma Scale (GCS) of 12. His temperature is 38.8 degrees Celsius, his pulse is 57 bpm and regular, blood pressure 150/90 mmHg, oxygen saturations 97% on 15L oxygen via a non-rebreathe mask.

Cardiovascular examination reveals normal heart sounds, capillary refill time of 3 seconds. His calves were soft and non-tender. His chest was clear with no signs of consolidation. Abdominal examination was unremarkable.

Neurological examination was difficult in view of the patients low GCS but no focal abnormality could be detected. On attempt to passively flex his neck he became agitated and obviously uncomfortable. Pupils were equal and reactive to light. Fundoscopy demonstrated bilateral oedematous optic discs.

Bloods were as follows:

Na+	130 mmol/L
K+	3.9 mmol/L
Urea	5 mmol/L
Creatinine	80 μ mol/L
Hb	160 g/L
WBC	$25.0 \times 10^9/L$
Neutrophils	91%

LFTs	Normal
CRP	90 mg/L

Based on the findings above, what is the most likely diagnosis?

	Intracerebral abscess
	Sepsis secondary to sinusitis
	Ecstasy overdose
	Meningitis
	Cerebral lymphoma

Dashboard

Overall score: 0%

1 -

Question 59 of 155



A 35-year-old man is brought into the Emergency Department after 3 successive tonic-clonic seizures. He was given 10mg of rectal diazepam and has since stabilised.

A brief history from his girlfriend states that he was usually fit and well apparent from recurrent sinusitis. Over the past month, however, he had been complaining of increasing headaches and had received a course of antibiotics from his GP.

He takes no regular medication but his partner states that they do occasionally take ecstasy whilst on nights out.

On examination, he is drowsy with a Glasgow Coma Scale (GCS) of 12. His temperature is 38.8 degrees Celsius, his pulse is 57 bpm and regular, blood pressure 150/90 mmHg, oxygen saturations 97% on 15L oxygen via a non-rebreathe mask.

Cardiovascular examination reveals normal heart sounds, capillary refill time of 3 seconds. His calves were soft and non-tender. His chest was clear with no signs of consolidation. Abdominal examination was unremarkable.

Neurological examination was difficult in view of the patients low GCS but no focal abnormality could be detected. On attempt to passively flex his neck he became agitated and obviously uncomfortable. Pupils were equal and reactive to light. Fundoscopy demonstrated bilateral oedematous optic discs.

Bloods were as follows:

Na+	130 mmol/L
K+	3.9 mmol/L
Urea	5 mmol/L
Creatinine	80 μ mol/L
Hb	160 g/L
WBC	$25.0 \times 10^9/L$
Neutrophils	91%

LFTs	Normal
CRP	90 mg/L

Based on the findings above, what is the most likely diagnosis?

	Intracerebral abscess
	Sepsis secondary to sinusitis
	Ecstasy overdose
	Meningitis
	Cerebral lymphoma

Dashboard

Overall score: **0%**
1 -

□ Question 59 of 155

□ □

A 35-year-old man is brought into the Emergency Department after 3 successive tonic-clonic seizures. He was given 10mg of rectal diazepam and has since stabilised.

A brief history from his girlfriend states that he was usually fit and well apparent from recurrent sinusitis. Over the past month, however, he had been complaining of increasing headaches and had received a course of antibiotics from his GP.

He takes no regular medication but his partner states that they do occasionally take ecstasy whilst on nights out.

On examination, he is drowsy with a Glasgow Coma Scale (GCS) of 12. His temperature is 38.8 degrees Celsius, his pulse is 57 bpm and regular, blood pressure 150/90 mmHg, oxygen saturations 97% on 15L oxygen via a non-rebreathe mask.

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	Sepsis secondary to sinusitis
	Ecstasy overdose
	Meningitis
	Cerebral lymphoma

Dashboard

Overall score: **0%**

1 -



Question 60 of 155

□ □

A 36 year old male Intravenous drug user presents to genito-urinary clinic. He was diagnosed with HIV 3 years ago after presenting with tuberculosis (TB). He was treated for TB for 6 months. He is now on third line anti-retroviral therapy for previous virological failure and co-trimoxazole. His most recent CD4 count was 104, and his viral load was 3,000 copies/ml.

He complains of weakness on his left side, and deterioration in vision, getting worse for four weeks. He has a moderately severe headache. On examination his visual acuity is 3/60 in his left eye and 6/6 in his right eye. He has weakness, in his left arm and leg, brisk reflexes and mildly increased tone.

He is immediately admitted.

A CT scan shows several ring enhancing lesions in his right cerebral hemispheres and one on the left cerebral hemisphere.

On ophthalmological review he has a large area of retinal necrosis in his left eye.

What is the diagnosis?

	CNS lymphoma
	Cerebral toxoplasmosis
	Cerebral TB
	Cerebral abscesses
	CNS Kaposi sarcoma

Overall score: **0%**

1 -

Question 60 of 155

□ □

A 36 year old male Intravenous drug user presents to genito-urinary clinic. He was diagnosed with HIV 3 years ago after presenting with tuberculosis (TB). He was treated for TB for 6 months. He is now on third line anti-retroviral therapy for previous virological failure and co-trimoxazole. His most recent CD4 count was 104, and his viral load was 3,000 copies/ml.

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1 -

□ Question 60 of 155

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What is the diagnosis?

	CNS lymphoma
	Cerebral toxoplasmosis
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	Cerebral abscesses
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Dashboard

Overall score: 0%

1 -

31



W 80 : L 40

□ Question 60 of 155

□ □

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What is the diagnosis?

	CNS lymphoma
	Cerebral toxoplasmosis
	Cerebral TB
	Cerebral abscesses
	CNS Kaposi sarcoma

Dashboard

Overall score: 0%

1 -

10



□ Question 60 of 155

□ □

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Dashboard

Overall score: 0%

1 -



Question 60 of 155

□ □

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On ophthalmological review he has a large area of retinal necrosis in his left eye.

What is the diagnosis?

	CNS lymphoma
	Cerebral toxoplasmosis
	Cerebral TB
	Cerebral abscesses
	CNS Kaposi sarcoma

Dashboard

Overall score: 0%

1 -

17



W 1942 : L 971

Question 61 of 155

□ □

A 28 year-old man presents to his doctor with a rash and bone pain. Radiographs of the limbs revealed numerous osteolytic lesions. He was successfully treated for secondary syphilis.

Which of the following tests is likely to remain positive in this patient despite treatment?

	Blood culture
	Treponema pallidum particle agglutination (TPPA)
	Venereal disease reference laboratory (VDRL)
	Rapid plasmin reagin (RPR)
	Wasserman test

Dashboard

Overall score: 0%

1 -

Question 61 of 155



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Dashboard

Overall score: **0%**

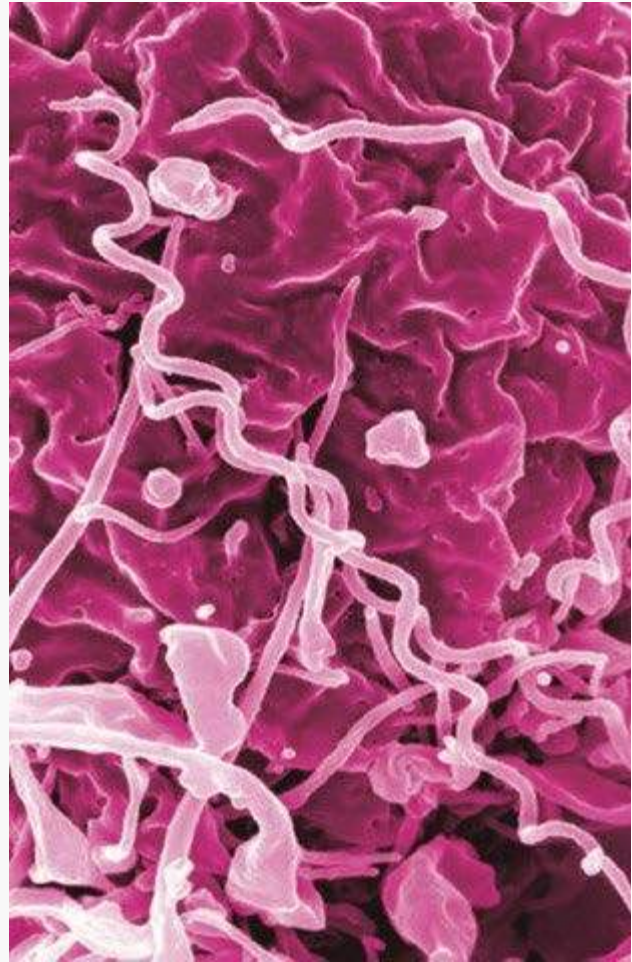
1 -

Question 61 of 155

A 28 year-old man presents to his doctor with a rash and bone pain. Radiographs show multiple osteolytic lesions. He was successfully treated for secondary syphilis.

Which of the following tests is likely to remain positive in this patient despite successful treatment?

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<input checked="" type="radio"/>	Treponema pallidum particle agglutination (TPPA)
<input type="radio"/>	Venereal disease reference laboratory (VDRL)
<input type="radio"/>	Rapid plasmin reagin (RPR)
<input type="radio"/>	Wasserman test



Dashboard

Overall score: **0%**

1 -

Question 62 of 155

A returning traveller presents to the emergency department with a 10 day history of fever, cough and abdominal pain. He has spent the last 2 weeks in Jakarta, Indonesia. His vital signs are: temperature: 40.1°C, heart rate 85 beats/minute, blood pressure 120/80 mmHg

On examination his spleen is enlarged and there is a rose spot rash over the chest. Blood culture grows salmonella typhi and the on-call doctor diagnoses enteric fever (typhoid).

If left untreated, what is the most important and serious complication that can occur within the following 2 weeks?

<input type="checkbox"/>	Chronic carriage within gallbladder
<input type="checkbox"/>	Bowel perforation and haemorrhage
<input type="checkbox"/>	Splenic infarction and rupture
<input type="checkbox"/>	Acute liver failure
<input type="checkbox"/>	Bacterial meningitis

Dashboard

Overall score: 0%

1 -

Question 62 of 155

□ □

A returning traveller presents to the emergency department with a 10 day history of fever, cough and abdominal pain. He has spent the last 2 weeks in Jakarta, Indonesia. His vital signs are: temperature: 40.1°C, heart rate 85 beats/minute, blood pressure 120/80 mmHg

On examination his spleen is enlarged and there is a rose spot rash over the chest. Blood culture grows salmonella typhi and the on-call doctor diagnoses enteric fever (typhoid).

If left untreated, what is the most important and serious complication that can occur within the following 2 weeks?

	Chronic carriage within gallbladder
	Bowel perforation and haemorrhage
	Splenic infarction and rupture
	Acute liver failure
	Bacterial meningitis

Dashboard

Overall score: **0%**

1 -

Question 63 of 155

A 76-year-old female has been under the care of the medical team for the past week. She has been treated for a full sensitive *E. coli* bacteraemia with intravenous co-amoxiclav thought be sourced from the urinary system. On completing the course, the patient remains in for ongoing physiotherapy input. The next day, the patient has a temperature spike and cultures demonstrate regrowth of *E. coli*.

What is the most appropriate next step?

<input type="checkbox"/>	Escalate antibiotics to meropenem
<input type="checkbox"/>	Image the renal tract
<input type="checkbox"/>	Commence treatment for hospital-acquired pneumonia
<input type="checkbox"/>	Urology referral
<input type="checkbox"/>	Urgent nephrostomy

Dashboard

Overall score: 0%

1 -

□ Question 63 of 155

□ □

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Dashboard

Overall score: 0%

1 -

□ Question 63 of 155

□ □

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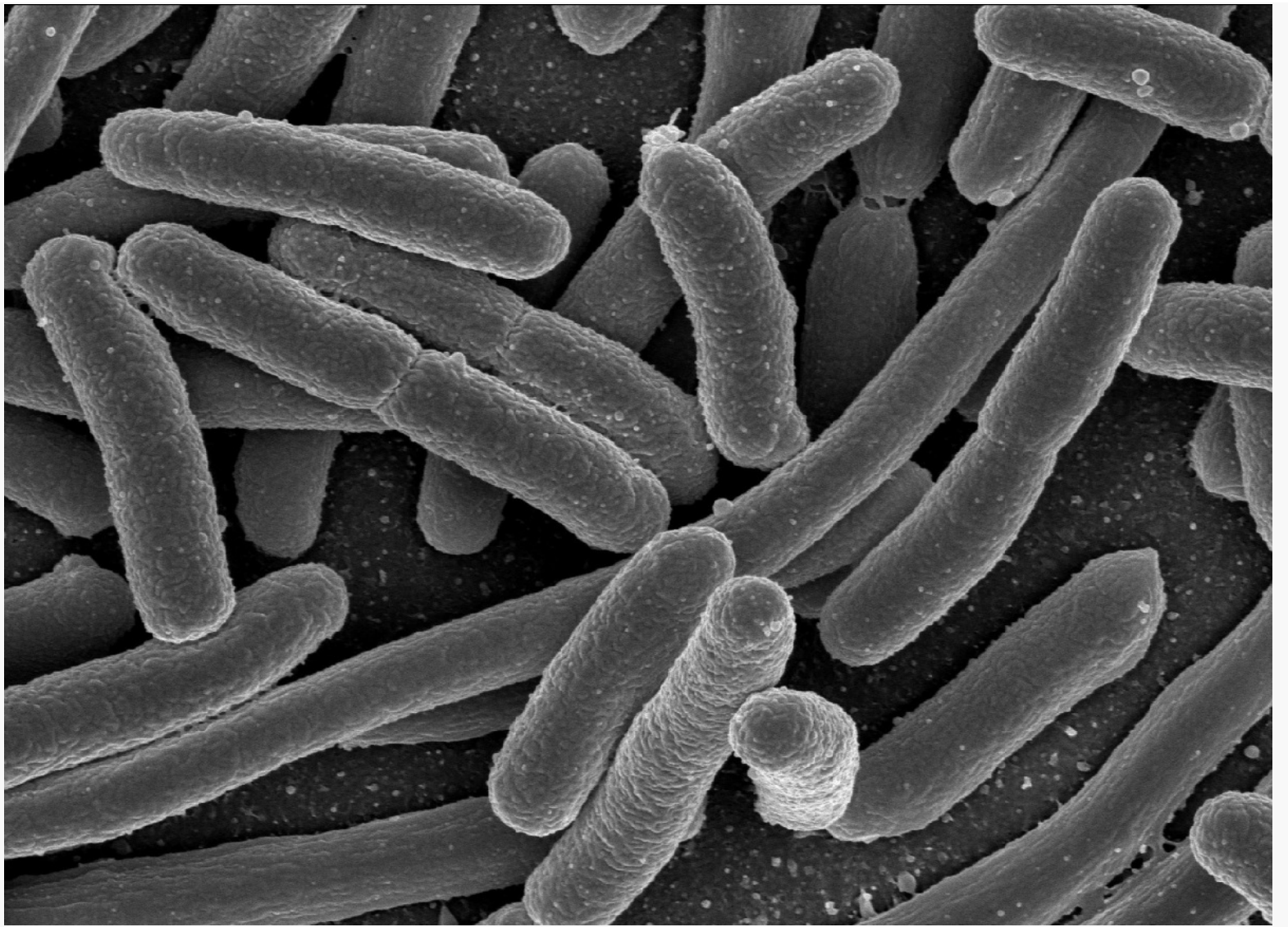
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	Image the renal tract
	Commence treatment for hospital-acquired pneumonia
	Urology referral
	Urgent nephrostomy

Dashboard

Overall score: 0%

1 -



□ Question 64 of 155



A 54 year old Caucasian man with HIV, is stable on Tenofovir, Emtricitabine and Kaletra (Lopinavir/Ritonavir). He has a 60 pack year smoking history and has been told his blood pressure is high previously but had never previously been to see his GP about it to get it treated. His GP is unaware of his HIV diagnosis and his main point of healthcare contact is with the Genito-urinary medicine services.

However over the last two years he has been troubled by gradually worsening cough, and shortness of breath. He has not lost weight. This has spurred him to start seeing his GP. He says that his GP initially gave him a blue inhaler and did some tests and told him he had COPD. Six weeks ago his GP gave him a Seretide 500 inhaler (one puff twice a day) and started him on Rampril (2.5mg daily) for his high blood pressure. The purple inhaler had provided some relief to his breathlessness but four days ago it ran out and he hasn't yet been back to see his GP. He still has two weeks worth of Ramipril tablets.

For the last few days he has been feeling faint and dizzy especially when standing up. His breathlessness and cough are no worse than usual. He has no fever. On examination his blood pressure is 91/76 his pulse is 94. He is afebrile, his respiratory rate is 24 and his oxygen saturations are 92% on room air. He has a mild wheeze on auscultation of his chest. His heart sounds are faint and his JVP is visible 3cm above his sternal angle. There is no pitting odema. There is nothing else of note on examination.

An ECG on admission is normal.

Hb	14.0 g/dl
Platelets	$199 \times 10^9/l$
WBC	$6.2 \times 10^9/l$

Na ⁺	130 mmol/l
K ⁺	5.9 mmol/l
Urea	5.6 mmol/l
Creatinine	85 μ mol/l
CRP	7 mg/l

What is the diagnosis?

	Adrenal tuberculosis
	Pericardial tuberculosis
	Adrenal insufficiency secondary to inhaled corticosteroid withdrawal
	Ramipril induced hypotension
	WaterhouseFriderichsen syndrome

Dashboard

Overall score: 0%

1 -

□ Question 64 of 155



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Dashboard

Overall score: **0%**
1 -

Question 65 of 155



A 36-year-old gentleman was admitted to the Medical Admission Unit. His principle complaint was watery diarrhoea which has been present for the last few weeks. He had not noticed the presence of blood or mucus in the stool. He also complained of transient pain on swallowing, and weight loss of 2 stones over the last year. He denied the presence of respiratory symptoms and abdominal pain. He had no past medical history of note from his GP records. He consumes 20 cans of standard strength lager per week, smokes 20 cigarettes per day and denies recreational drug use. He had no fixed abode.

On examination, he was unkempt and dishevelled, with a BMI of 17.1 kg/m². Cardiovascular and respiratory examinations were unremarkable except for an oxygen saturation of 94% on room air. His heart rate was 92/min, blood pressure 112/62 mmHg and temperature 36.7°C. Abdominal examination was also unremarkable though examination of the oral cavity revealed the presence of multiple aphthous ulcers. Examination of the neck revealed multiple small palpable cervical lymph nodes. Fundoscopy revealed the presence of white patches but otherwise, nil else and central and peripheral nervous system examination was otherwise normal. Skin examination revealed multiple pearly pink umbilicated nodules.

Initial investigations revealed the following:

Hb	122 g/l
Platelets	189 * 10 ⁹ /l
WBC	3.6 * 10 ⁹ /l

Chest x-ray: normal appearances of the heart and chest

ECG: 92bpm normal sinus rhythm, no other abnormalities seen

Urinalysis: normal

Stool MCS: normal interim results, pending further analysis

Which is the single investigation most likely to lead to the underlying diagnosis?

	CT head, chest, abdomen and pelvis
	Upper gastrointestinal endoscopy

	Bone marrow biopsy
	Colonoscopy
	HIV serology

Dashboard

Overall score: **0%**

1 -

Question 65 of 155



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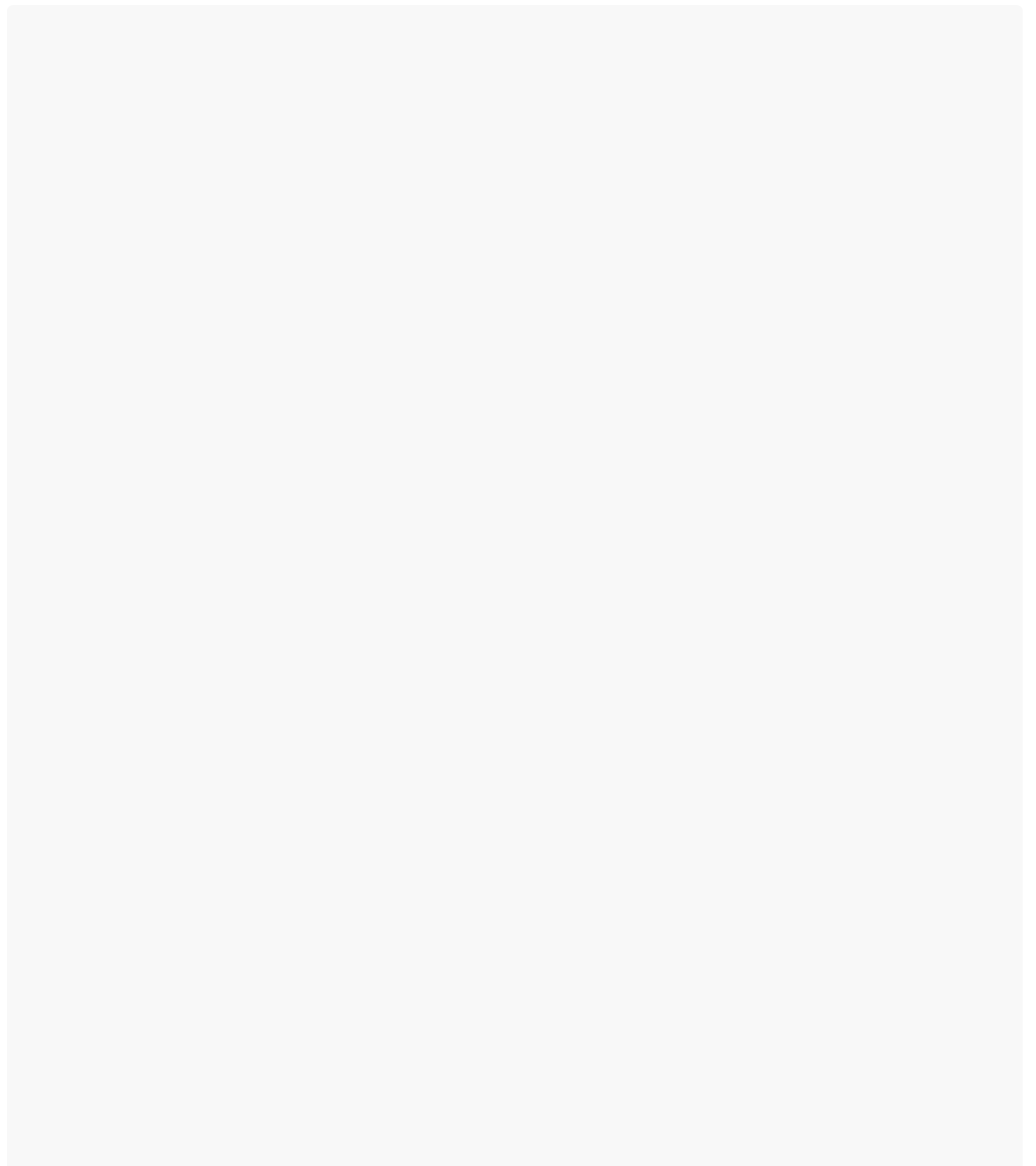
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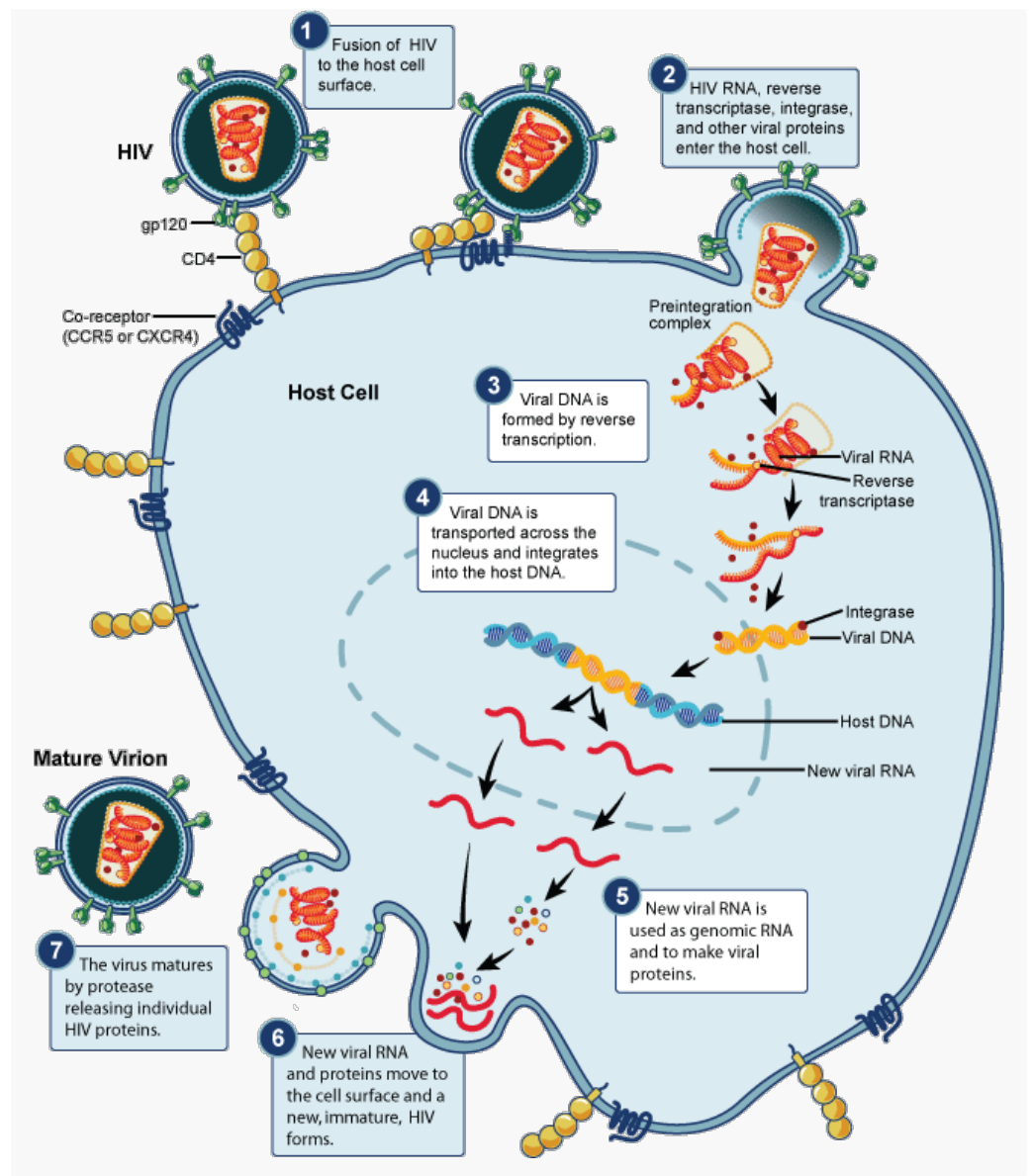
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Dashboard

Overall score: 0%
1 -





□ Question 66 of 155



A 45 year old man with mild learning difficulties and newly diagnosed advanced HIV (CD4 count 65 /mm³) attends A&E from his residential home. He has an intensely itchy rash on his hands, arms, groin, legs and feet. He was recently commenced on Atripla (Emtricitabine, Tenofovir, Efavirenz) and co-trimoxazole.



© Image used on license from DermNet NZ



There is extensive crusted scaling on his arms, groins and hands. On closer examination there are grey burrow marks between the webs of his fingers and toes. There are itchy nodules extensively over the palms and backs of his hands.

What is the most appropriate treatment?

	Isolate and apply topical malathion cream for 24 hours
	Isolate and stop co-trimoxazole
	Discharge with topical steroids
	Change his antiretroviral therapy to a second line regimen
	Isolate and give ivermectin orally

Dashboard

Overall score: **0%**

1 -

□ Question 66 of 155



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1 -

□ Question 66 of 155

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© Image used on license from DermNet NZ



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Dashboard

Overall score: **0%**

1 -

□ Question 67 of 155



A 48-year-old woman originally from South Africa has lived in the UK for 17 years and works as a librarian. She was diagnosed with HIV 18 months ago after she discovered her husband had been having an affair. Her lowest CD4 count was 211 /mm³. She was commenced on Anti-Retroviral Therapy (ART) on diagnosis with Tenofovir, Emtricitabine and Kaletra (Lopinavir/Ritonavir) and Co-trimoxazole.

Her past medical history prior to diagnosis was unremarkable. She has been well on her ART until 3 weeks ago when she was seen in HIV clinic with a 4-week history of a cough and weight loss of 3 kilogrammes.

She had a chest x-ray showing new right apical nodular opacities and had scanty Acid Fast Bacilli on sputum smear microscopy. Her CD4 count was 312 /mm³ with and she was commenced on standard TB therapy with Rifampicin, Isoniazid, Ethambutol and Pyrazinamide, as well as switching Kaletra to Efavirenz.

Today she has been brought into hospital by the Police, she was found naked wandering in her street, accosting passers-by and asking them to help her remove a device planted under her skin by the CIA to monitor her thoughts.

Her observations are within normal limits. She is moderately difficult to examine but there is no focal neurology detectable. She has mildly reduced air entry in her right upper lobe and her examination is otherwise normal.

Results:

Hb	8.1 g/dl
MCV	84 fl
Platelets	86 * 10 ⁹ /l
WBC	4.5 * 10 ⁹ /l

CRP	27 mg/l
ESR	41 mm/hr

Urea & electrolytes, liver function tests and thyroid function tests were normal. A CT head and lumbar puncture were also unremarkable.

What is the cause of her admission?

	TB meningitis
	HIV encephalopathy
	Ethambutol toxicity
	Efavirenz toxicity
	Immune thrombocytopaenic purpura

Dashboard

Overall score: 0%

1 -

□ Question 67 of 155



A 48-year-old woman originally from South Africa has lived in the UK for 17 years and works as a librarian. She was diagnosed with HIV 18 months ago after she discovered her husband had been having an affair. Her lowest CD4 count was 211 /mm³. She was commenced on Anti-Retroviral Therapy (ART) on diagnosis with Tenofovir, Emtricitabine and Kaletra (Lopinavir/Ritonavir) and Co-trimoxazole.

Her past medical history prior to diagnosis was unremarkable. She has been well on her ART until 3 weeks ago when she was seen in HIV clinic with a 4-week history of a cough and weight loss of 3 kilogrammes.

She had a chest x-ray showing new right apical nodular opacities and had scanty Acid Fast Bacilli on sputum smear microscopy. Her CD4 count was 312 /mm³ with and she was commenced on standard TB therapy with Rifampicin, Isoniazid, Ethambutol and Pyrazinamide, as well as switching Kaletra to Efavirenz.

Today she has been brought into hospital by the Police, she was found naked wandering in her street, accosting passers-by and asking them to help her remove a device planted under her skin by the CIA to monitor her thoughts.

Her observations are within normal limits. She is moderately difficult to examine but there is no focal neurology detectable. She has mildly reduced air entry in her right upper lobe and her examination is otherwise normal.

Results:

Hb	8.1 g/dl
MCV	84 fl
Platelets	86 * 10 ⁹ /l
WBC	4.5 * 10 ⁹ /l

CRP	27 mg/l
ESR	41 mm/hr

Urea & electrolytes, liver function tests and thyroid function tests were normal. A CT head and lumbar puncture were also unremarkable.

What is the cause of her admission?

	TB meningitis
	HIV encephalopathy
	Ethambutol toxicity
	Efavirenz toxicity
	Immune thrombocytopaenic purpura

Dashboard

Overall score: **0%**
1 -

Question 68 of 155

□ □

A 40-year-old man is stable on warfarin therapy for the treatment of atrial fibrillation. Whilst on a stag party in Spain he develops scrotal pain and itching. Whilst in Spain, he is treated with a course of ciprofloxacin for a presumed urinary tract infection. Two weeks later he develops a hot, red, swollen and painful knee and both elbows become inflamed. On examination in the emergency department you identify localised tenderness of the knee and painful movement in all directions. The knee is red and hot. Both elbows are mildly warm, with painful movement on flexion and extension. His conjunctiva are also red. He is afebrile. Examination of his external genitalia is essentially normal however there is evidence of excoriation around the scrotum.

What is the cause of his knee pain?

	Reactive arthritis
	Still's disease
	Septic arthritis
	Gout
	Haemarthrosis

Dashboard

Overall score: 0%

1 -

Question 68 of 155

□ □

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What is the cause of his knee pain?

	Reactive arthritis
	Still's disease
	Septic arthritis
	Gout
	Haemarthrosis

Dashboard

Overall score: **0%**

1 -

□ Question 69 of 155

□ □

A 24-year-old recent immigrant from Albania presents to the emergency department with fever, headache and malaise. Over the past 24 hours he has also developed bilateral pain and swelling at the angle of the jaw, which is made worse by talking or chewing. On examination his pulse is 90/min, temperature 38.4°C and bilateral palpable, tender parotid glands are noted.

Given the likely diagnosis, which one of the following complications is he most likely to develop?

	Orchitis
	Pancreatitis
	Encephalitis
	Myocarditis
	Pneumonia

Dashboard

Overall score: 0%

1 -

Question 69 of 155

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Given the likely diagnosis, which one of the following complications is he most likely to develop?

	Orchitis
	Pancreatitis
	Encephalitis
	Myocarditis
	Pneumonia

Dashboard

Overall score: **0%**

1 -

Question 70 of 155

□ □

A 44-year-old man presents with a 1 day history of fever. He returned to the UK 12 days ago after visiting his family in northern Uganda. He has been resident in the UK for the last 20 years and returns home on average once a year. He does not routinely take malaria prophylaxis.

On examination his temperature is 39.4°C, pulse is 86 beats per minute, his blood pressure is 115/78 mmHg and his oxygen saturations are 98% on air. The remainder of the physical examination is normal. A thick and thin blood film are sent to the lab which confirms *Plasmodium falciparum* malaria. The report reads 2.1% parasitaemia with the presence of schizonts.

What is the most appropriate initial management strategy?

	Intravenous artesunate
	Oral quinine sulfate
	Oral chloroquine
	Oral atovaquone-proguanil (Malarone)
	Intravenous quinine

Dashboard

Overall score: 0%

1 -

Question 70 of 155

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	Oral quinine sulfate
	Oral chloroquine
	Oral atovaquone-proguanil (Malarone)
	Intravenous quinine

Dashboard

Overall score: **0%**

1 -

Question 71 of 155

□ □

A 75-year-old male with a long history of intravenous drug use is admitted with fevers, rigors and back pain. Three sets of blood cultures taken at admission grow positive for gram positive cocci in clusters. He is suspected of having *Staphylococcus aureus* bacteraemia and is commenced on intravenous vancomycin.

Half an hour after the infusion is commenced, he is noted by the nurse to be flushed. On examination, he is noted to have erythema over his neck, face and trunk but denies any significant distress or discomfort.

His observations are as follow: blood pressure 125/70 mmHg, heart rate 85/min, temperature of 36.8°C, respiratory rate of 18/min and oxygen saturation of 98% on room air.

Which of the following is the most appropriate management?

	Stopping the vancomycin infusion, administering 200mg of IV hydrocortisone and informing the patient that he is allergic to the medication
	Stopping the vancomycin infusion and administering a single dose of 0.5mcg intramuscular adrenaline
	Stopping the vancomycin infusion until symptoms resolve and then re-starting a slower rate
	Stopping the vancomycin infusion and prescribing topical 1% hydrocortisone cream to affected areas
	Continuing the vancomycin infusion and administering 1000 ml of 0.9% saline solution over 1 hour

Dashboard

Overall score: 0%

1 -

Question 71 of 155

□ □

A 75-year-old male with a long history of intravenous drug use is admitted with fevers, rigors and back pain. Three sets of blood cultures taken at admission grow positive for gram positive cocci in clusters. He is suspected of having *Staphylococcus aureus* bacteraemia and is commenced on intravenous vancomycin.

Half an hour after the infusion is commenced, he is noted by the nurse to be flushed. On examination, he is noted to have erythema over his neck, face and trunk but denies any significant distress or discomfort.

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	Stopping the vancomycin infusion and prescribing topical 1% hydrocortisone cream to affected areas
	Continuing the vancomycin infusion and administering 1000 ml of 0.9% saline solution over 1 hour

Dashboard

Overall score: **0%**

1 -

□ Question 72 of 155



A 25-year-old man is seen in the walk-in travellers clinic. He returned from a holiday in Brazil 5 days ago and has a 1 day history of fever, headache and myalgia. He is usually fit and well. He tells you he took regular malaria prophylaxis while away.

On examination he has a heart rate of 110 beats per minute and a blood pressure of 102/72 mmHg. His temperature is 38.1 °C and he has dry mucous membranes. Examination of cardiovascular, respiratory and gastrointestinal systems is unremarkable but he has multiple mosquito bites over his arms and legs.

His blood tests are as follows:

Hb	132 g/l	Na ⁺	144 mmol/l	Bilirubin	8 µmol/l
Platelets	91 * 10 ⁹ /l	K ⁺	3.5 mmol/l	ALP	98 u/l
WBC	13 * 10 ⁹ /l	Urea	9.7 mmol/l	ALT	22 u/l
Neuts	11 * 10 ⁹ /l	Creatinine	111 µmol/l	γGT	14 u/l
Lymphs	0.6 * 10 ⁹ /l	CRP	78 mg/l	Albumin	40 g/l

He is admitted for broad spectrum antibiotics, fluids and analgesia but his fever continues. His malaria films are negative but he has a positive PCR for dengue virus. Antibiotics are stopped but fluids are continued. His fever and headache settle though he does developed some mild ankle oedema.

Which of the following is true regarding his discharge?

	Dengue shock is unlikely to occur after 24 hours post-fever
	Dengue shock is unlikely to occur once platelets improving
	Dengue shock is unlikely to occur once renal function improving
	Platelets above 20 * 10 ⁹ /l are considered safe for discharge

Dashboard

Overall score: **0%**

1 -

□ Question 72 of 155



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	Platelets above 20 * 10 ⁹ /l are considered safe for discharge

Stable haematocrit is essential for discharge

Dashboard

Overall score: **0%**

1 -

Question 73 of 155

A 29-year-old lady comes to see you for advice having seen news of the recent Zika virus outbreak. She and her husband are planning on starting a family, but she has only arrived back from Brazil last week after a business trip. She has not experienced any fever or worrying symptoms, either during travel or since arrival back in the UK. What would be the most appropriate advice to give her?

<input type="radio"/>	Start 5mg folic acid daily
<input type="radio"/>	If no fever can become pregnant
<input type="radio"/>	Need to check Zika virus serology before becoming pregnant
<input type="radio"/>	Should avoid becoming pregnant for at least 2 weeks after travel
<input type="radio"/>	Should avoid becoming pregnant for at least 8 weeks after travel

Dashboard

Overall score: 0%

1 -

□ Question 73 of 155

□ □

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	If no fever can become pregnant
	Need to check Zika virus serology before becoming pregnant
	Should avoid becoming pregnant for at least 2 weeks after travel
	Should avoid becoming pregnant for at least 8 weeks after travel

Dashboard

Overall score: **0%**

1 -

□ Question 74 of 155

□ □

A 26-year-old woman attends the emergency department requesting treatment following being scratched by a cat two days previously. She had been on holiday with family in Sri Lanka and had been playing with an apparently normal cat who came up to her in the street. Unfortunately, the cat had then scratched her on the forearm and hand, although she insisted that her wounds had only been superficial with no bleeding or broken skin. A relative (a doctor at the local hospital) had subsequently caught the cat and has been holding it in quarantine at his home. The patient had then returned to the UK so as to not miss her flight but on the advice of her relative was requesting treatment for a possible rabies exposure.

The patient's past medical history was significant only for tibial plateau fracture sustained in a sporting accident five years previously. She did not take any regular medications and denied any allergies. She did not recall ever having had a previous course of rabies vaccination.

Examination of the patient demonstrated multiple superficial scratches to her left arm that appeared to be healing normally. There were no areas of broken skin or areas consistent with bite marks. The patient was fully oriented with normal cranial nerve and peripheral nervous examinations. Basic observations were within physiological limits.

What is the correct rabies post-exposure prophylaxis for this patient?

	No action required
	Full course rabies vaccination
	Full course rabies vaccination, stopped if quarantined cat is healthy 10 days after exposure
	Full course rabies vaccination and rabies immunoglobulin
	Full course rabies vaccination if quarantined cat shows signs of rabies within 10 days of exposure

Dashboard

Overall score: 0%

□ Question 74 of 155

□ □

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Dashboard

Overall score: **0%**

□ Question 75 of 155

□ □

A 26-year-old woman presents to the Emergency Department with a one week history of cough, fever and headache. She returned from Indonesia one week ago.

On examination she appears drowsy and a little muddled. She has no photophobia or focal neurological deficit. She has mild hepatosplenomegaly but no palpable lymphadenopathy. Her chest is clear and heart sounds are normal. She has a macular rash on both legs with a greyish-black scab-like lesion on her left shin.

Investigations results:

Chest x-ray: Bilateral patchy consolidation

Blood culture: Pending

Hb	120 g/l
Platelets	$130 \times 10^9/l$
WBC	$18 \times 10^9/l$
Blood film	Left shifted neutrophils in large numbers

Na ⁺	142 mmol/l
K ⁺	4.1 mmol/l
Urea	6 mmol/l
Creatinine	90 μ mol/l

Bilirubin	23 μ mol/l
ALP	170 u/l
ALT	50 u/l
Albumin	35 g/l

What is the most appropriate first line treatment?

	Azithromycin
	Chloroquine
	Doxycycline
	Mefloquine
	Supportive medications

Dashboard

Overall score: **0%**

1 -

□ Question 75 of 155

□ □

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What is the most appropriate first line treatment?

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	Chloroquine
	Doxycycline
	Mefloquine
	Supportive medications

Dashboard

Overall score: **0%**
1 -

Question 76 of 155

□ □

A 28-year-old man who has recently immigrated from Nigeria presents with a penile ulcer. He reports that it initially started as a small lump but then later progressed to a painful ulcer.

On examination, there is a 7mm diameter tender single ulcer with an undermined ragged edge just proximal to the glans of the penis. Examination of the testes and anal region is unremarkable. There is tender inguinal lymphadenopathy.

What is the most likely diagnosis?

	Syphilis
	Herpes simplex virus
	Granuloma inguinale
	Lymphogranuloma venereum
	Chancroid

Dashboard

Overall score: 0%

1 -

□ Question 76 of 155

□ □

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Dashboard

Overall score: **0%**

1 -

Question 77 of 155

□ □

You see Mr Smith, a 35-year-old man-who-has-sex-with-men (MSM) in clinic. He was diagnosed with HIV 5 years ago, commencing combination antiretroviral therapy (cART). Following a number of alterations to his cART due to side effects he responded well to a combination of tenofovir, emtricitabine and ritonavir boosted atazanavir. His plasma viral load (pVL) of HIV RNA has remained undetectable and his adherence has been good.

In clinic today Mr Smith reports 5 weeks of drenching night sweats, a dry cough and some subjective weight loss, going up a belt buckle during this time period. On examination you note that he appears pale and auscultation of the chest elicits crepitations in the left upper zone. You perform a chest X-ray which demonstrates a cavitating lesion in the left upper lobe. You arrange induced sputum samples which confirm a diagnosis of pulmonary tuberculosis.

You explain your diagnosis to Mr Smith and the need to urgently commence him on anti-tuberculosis chemotherapy. Whilst he is happy to commence treatment, he is adamant that he does not want to risk his viral control and states that he is not willing to consider altering his cART regime at present.

What is the most appropriate management step to treat Mr Smith?

	Hold his ART
	Commence rifabutin, isoniazid, ethambutol and pyrazinamide
	Commence isoniazid monotherapy
	Switch protease inhibitor to a novel ARV agent
	Commence rifampicin, isoniazid, pyrazinamide and ethambutol

Dashboard

Overall score: 0%

1 -

Question 77 of 155

□ □

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Dashboard

Overall score: **0%**

1 -

□ Question 78 of 155

□ □

A 17-year-old man who has recently come to the UK from Rwanda is admitted to hospital. His friend describes him complaining of a headache and fever for the past four days. Further history reveals that he is very lethargic with a dry cough and generalised myalgia. The patient also describes passing some dark urine this morning. He has no past medical history of note. On examination his pulse is 110/min, temperature 38.1°C, oxygen saturations 98% on room air and blood pressure 110/68 mmHg, His sclera are jaundiced and there is enlargement of the liver and spleen. Bloods show the following:

Na ⁺	142 mmol/l
K ⁺	4.8 mmol/l
Urea	12.3 mmol/l
Creatinine	144 µmol/l

What is the most likely diagnosis?

	Typhoid
	Dengue fever
	African trypanosomiasis
	Malaria
	Leishmaniasis

Dashboard

Overall score: 0%

1 -

□ Question 78 of 155

□ □

A 17-year-old man who has recently come to the UK from Rwanda is admitted to hospital. His friend describes him complaining of a headache and fever for the past four days. Further history reveals that he is very lethargic with a dry cough and generalised myalgia. The patient also describes passing some dark urine this morning. He has no past medical history of note. On examination his pulse is 110/min, temperature 38.1°C, oxygen saturations 98% on room air and blood pressure 110/68 mmHg, His sclera are jaundiced and there is enlargement of the liver and spleen. Bloods show the following:

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Creatinine	144 µmol/l

What is the most likely diagnosis?

	Typhoid
	Dengue fever
	African trypanosomiasis
	Malaria
	Leishmaniasis

Dashboard

Overall score: 0%

1 -

Question 79 of 155



A 45-year-old male from Afghanistan presents with a rash all over his body. He describes the rash and suggests that it was initially multiple specks of light skin that were not raised or roughened. they have now progressed to plaques, some of which have become nodular.

He is otherwise well and his past medical history is significant only for the successful treatment of visceral leishmaniasis in his home country some 5 years ago.

What is the most likely underlying diagnosis?

	Leprosy
	HIV
	Post kala azar dermal leishmaniasis (PKDL)
	Histoplasmosis
	Pityriasis versicolor

Dashboard

Overall score: 0%

1 -

Question 79 of 155



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	HIV
	Post kala azar dermal leishmaniasis (PKDL)
	Histoplasmosis
	Pityriasis versicolor

Dashboard

Overall score: 0%

1 -

Question 80 of 155

□ □

A 42-year-old male from Bolivia presents with a 8 month history of progressive fatigue, dyspnoea and intermittent chest pains. He is a chronic smoker and during a recent severe episode of breathlessness had consulted his GP who prescribed amoxicillin and prednisolone to combine with his regular inhaler therapy. Shortly after this he experienced a febrile episode which had lasted 7 days before resolving. His breathlessness also worsened during this period.

On examination he has a temperature of 37.2 degrees, a heart rate of 98 beats per minute, a blood pressure of 110/70 mmHg and a respiratory rate of 24/min. His jugular venous pressure was raised, there was lower limb oedema to the mid shin and a pan systolic murmur heard best in inspiration in the left parasternal region. An ECG showed a prolonged PR interval.

What is the most likely underlying diagnosis?

	Ischaemic heart disease
	Chronic pulmonary emboli
	Chronic Chagas cardiomyopathy
	Sarcoidosis
	HIV

Dashboard

Overall score: 0%

1 -

Question 80 of 155

□ □

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What is the most likely underlying diagnosis?

	Ischaemic heart disease
	Chronic pulmonary emboli
	Chronic Chagas cardiomyopathy
	Sarcoidosis
	HIV

Dashboard

Overall score: 0%

1 -

□ Question 81 of 155

□ □

A 28-year-old woman who is 13-weeks pregnant is referred into the medical admissions unit by the general practitioner. Her 2-year-old son has developed a blistering generalised rash, which you suspect may be chicken pox. She feels well with no respiratory symptoms and has no evidence of rash. On questioning she does not remember contracting chickenpox as a child.

What is the next appropriate step?

	Discharge and reassure
	Administer varicella-zoster immunoglobulin (VZIG)
	Vaccinate against varicella
	Check varicella zoster virus IgG
	Oral aciclovir prophylaxis

Dashboard

Overall score: 0%

1 -

□ Question 81 of 155

□ □

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	Check varicella zoster virus IgG
	Oral aciclovir prophylaxis

Dashboard

Overall score: **0%**

1 -

□ Question 82 of 155



A 63 year old man, originally from Ukraine is admitted to hospital with a right sided pleural effusion. On admission he is febrile at 37.8 C. He reports 6kg of weight loss, and night sweats over the previous 4 months.

His pleural effusion is exudative with a pH of 7.4.

A CT chest/abdo/pelvis reveals a right sided pleural effusion, multiple enlarged lymph nodes in his abdomen and mediastinum. A pleural biopsy reveals scanty Acid Fast Bacilli and he is commenced on treatment for tuberculosis with Rifampicin, Isoniazid, Ethambutol, Pyrazinamide. PCR confirms this to be Mycobacterial Tuberculosis complex with wild type rpoB, katG, inhA genes. His HIV serology is positive and his CD4 count is 47 cells/mm³

One week following admission he is commenced on anti-retroviral treatment with Emtricitabine, Lamivudine and Efavirenz with Co-trimoxazole.

Three weeks later he becomes more unwell. He has daily fevers up to 39°C.

On examination he is febrile 38.1 with an associated tachycardia of 119 beats/min, his blood pressure is 112/67 mmHg and respiratory rate is 22 breaths/min. His oxygen saturations are 93%. He has reduced air entry at the right base, but no other abnormality on examinations.

His results are as following:

Hb	10.1 g/dl
MCV	82 fl
Platelets	97 * 10 ⁹ /l
WBC	7.8 * 10 ⁹ /l
Neutrophils	6.3 * 10 ⁹ /l
Lymphocytes	1.2 * 10 ⁹ /l
Eosinophils	0.02 * 10 ⁹ /l

ESR	62 mm/hr
-----	----------

Bilirubin	9 µmol/l
ALP	312 u/l
ALT	153 u/l
γGT	456 u/l
Albumin	22 g/l
CRP	67 mg/l
Lactate	1.1 mmol/l

Other results were as follows;

Urea and electrolytes: normal.
Clotting screen: normal
Blood cultures: negative (x3)
Urinalysis: normal
ECHO: normal
CXR: right pleural effusion
USS abdo: several abdominal nodes visible, nil else.
Toxoplasmosis serology: negative
CMV: IgG negative IgM: negative
EBV: IgG positive IgM: negative
Cryptococcal antigen: Negative
Leishmania serology: negative

What is the most likely diagnosis?

	Pneumococcal pneumonia
	Drug resistant tuberculosis
	Infectious mononucleosis
	Immune reconstitution inflammatory syndrome
	Burkitts Lymphoma

Dashboard

Overall score: 0%

1 -

□ Question 82 of 155



A 63 year old man, originally from Ukraine is admitted to hospital with a right sided pleural effusion. On admission he is febrile at 37.8 C. He reports 6kg of weight loss, and night sweats over the previous 4 months.

His pleural effusion is exudative with a pH of 7.4.

A CT chest/abdo/pelvis reveals a right sided pleural effusion, multiple enlarged lymph nodes in his abdomen and mediastinum. A pleural biopsy reveals scanty Acid Fast Bacilli and he is commenced on treatment for tuberculosis with Rifampicin, Isoniazid, Ethambutol, Pyrazinamide. PCR confirms this to be Mycobacterial Tuberculosis complex with wild type rpoB, katG, inhA genes. His HIV serology is positive and his CD4 count is 47 cells/mm³

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USS abdo: several abdominal nodes visible, nil else.
Toxoplasmosis serology: negative
CMV: IgG negative IgM: negative
EBV: IgG positive IgM: negative
Cryptococcal antigen: Negative
Leishmania serology: negative

What is the most likely diagnosis?

	Pneumococcal pneumonia
	Drug resistant tuberculosis
	Infectious mononucleosis
	Immune reconstitution inflammatory syndrome
	Burkitts Lymphoma

Dashboard
Overall score: 0%
1 -

Question 83 of 155

□ □

A 24 year old Somali woman attends her booking appointment in the UK for her first pregnancy. Screening tests reveal that she is HIV positive. She is asymptomatic.

Her viral load is 150 000 copies/ml and her CD4 count is 523 cells/mm³. No viral resistance is detected. Her hepatitis serology is negative. Her husband consequently tests negative for HIV.

She is commenced on triple anti-retroviral therapy (ART) with zidovudine, lamivudine and lopinavir/ritonavir. By 36 weeks her viral load is undetectable at <20 copies/ml.

Which of the following statements is true regarding her ongoing management?

	She should have an elective caesarean section and continue to take her ART whilst breast-feeding.
	She should have a vaginal delivery and continue to take ART whilst breast feeding.
	She should have an elective caesarean section. ART should be continued.
	She should have a vaginal delivery and formula feed. ART can be discontinued.
	She should have a vaginal delivery and formula feed. ART should be continued.

Dashboard

Overall score: 0%

1 -

Question 83 of 155

□ □

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	She should have a vaginal delivery and formula feed. ART can be discontinued.
	She should have a vaginal delivery and formula feed. ART should be continued.

Dashboard

Overall score: **0%**

1 -

□ Question 84 of 155

□ □

An 82-year-old gentleman inpatient is reviewed on the ward round. He originally presented with diarrhoea on a background of ulcerative colitis flare and is managed with oral and rectal mesalazine. His bowel has settled but he developed a rash around his left antecubital fossa, and he has developed a temperature of 38.2°C. On examination, his chest sounds clear and his abdomen is soft, but the left antecubital fossa has a tender and warm erythematous rash. Stool results show no growth, abdominal and chest X-ray are clear but a MRSA swab from the nose is positive. What is the most appropriate treatment?

	Mupirocin and chlorhexidine
	Benzympenicillin
	Tazocin
	Vancomycin
	Flucloxacillin

Dashboard

Overall score: 0%

1 -

Question 84 of 155

□ □

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	Benzympenicillin
	Tazocin
	Vancomycin
	Flucloxacillin

Dashboard

Overall score: **0%**

1 -

□ Question 84 of 155

□ □

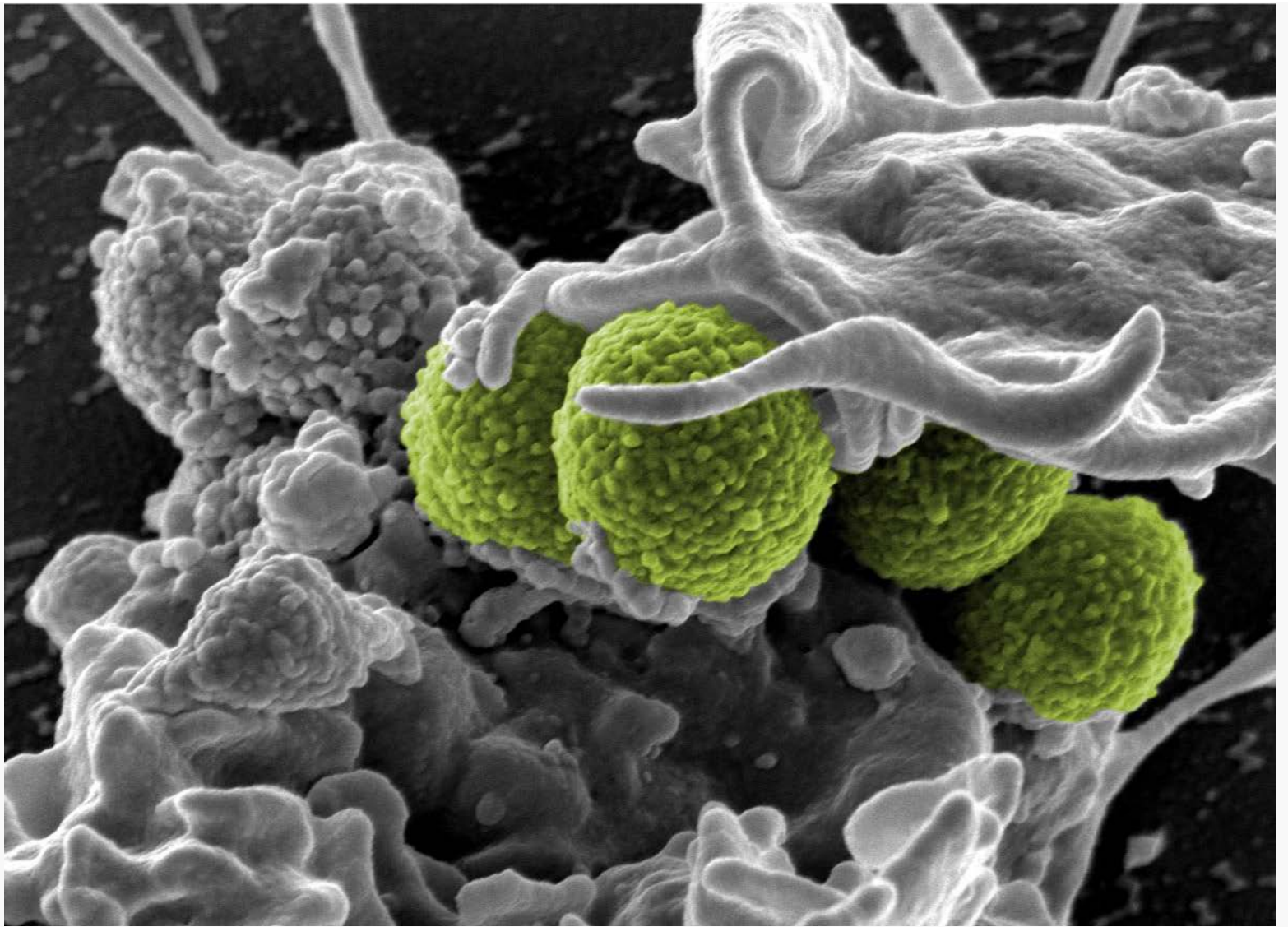
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	Mupirocin and chlorhexidine
	Benzylpenicillin
	Tazocin
	Vancomycin
	Flucloxacillin

Dashboard

Overall score: 0%

1 -



□ Question 85 of 155



A 73-year-old male presents with a three-day history of a productive cough and shortness of breath, and for the last 3 hours he has been confused. His wife tells you that he has been coughing up large volumes of green sputum for the last two hours. He is known to have metastatic prostate cancer and receives regular hormone injections along with his regular medications which are ramipril, simvastatin and aspirin. His temperature is 38.1°C, respiratory rate 24/min, heart rate 115/min and blood pressure 88/45 mmHg. He is dyspnoeic and agitated. There are some crepitations in his right lung field. Heart sounds are normal and his jugular venous pressure is not visible.

Bloods today show:

Hb	151 g/l
Platelets	654 * 10 ⁹ /l
WBC	17.1 * 10 ⁹ /l

Na ⁺	141 mmol/l
K ⁺	3.5 mmol/l
Creatinine	90 µmol/l
CRP	167 mg/l

Bilirubin	16 µmol/l
ALP	200 u/l
ALT	29 u/l
Albumin	29 g/l

Venous Gas:

pH	7.31

PO2	9.7kPa
PCO2	3.2kPa
Lactate	3.1mmol/l

Chest X-ray: right lower lobe consolidation.

Which term best describes his condition?

	Upper respiratory tract infection (URTI)
	Systemic inflammatory response syndrome (SIRS)
	Sepsis
	Severe sepsis
	Septic shock

Dashboard

Overall score: 0%

1 -

□ Question 85 of 155



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K ⁺	3.5 mmol/l
Creatinine	90 µmol/l
CRP	167 mg/l

Bilirubin	16 µmol/l
ALP	200 u/l
ALT	29 u/l
Albumin	29 g/l

Venous Gas:

pH	7.31

PO2	9.7kPa
PCO2	3.2kPa
Lactate	3.1mmol/l

Chest X-ray: right lower lobe consolidation.

Which term best describes his condition?

	Upper respiratory tract infection (URTI)
	Systemic inflammatory response syndrome (SIRS)
	Sepsis
	Severe sepsis
	Septic shock

Dashboard

Overall score: **0%**

1 -

Question 86 of 155

□ □

A 40-year-old man has been found to have a liver abscess. Given that he had spent extended periods of time in South East Asia and the rusty brown colour of the pus drained, microbiologic testing included looking for parasites. It has since been found that the causative agent was *Entamoeba histolytica*. Which medication is most appropriate?

	Metronidazole
	Cefepime
	Chloroquine
	Ceftriaxone
	Diloxanide furoate

Dashboard

Overall score: 0%

1 -

Question 86 of 155

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	Cefepime
	Chloroquine
	Ceftriaxone
	Diloxanide furoate

Dashboard

Overall score: **0%**

1 -

□ Question 86 of 155

□ □

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	Metronidazole
	Cefepime
	Chloroquine
	Ceftriaxone
	Diloxanide furoate

Dashboard

Overall score: 0%

1 -



□ Question 87 of 155



A 45-year-old female presents with a history of headache and generalised malaise for the last two months. She describes her headaches as being a tight band like sensation which is present almost throughout the day and causes significant difficulty in sleeping at night. She also mentions occasional episodes of vomiting along with low-grade fever and weight loss of about 7 kg over the same duration of time. She suffers from generalised anxiety disorder and takes 0.5mg alprazolam TDS. She returned from Dubai 9 months ago where she had been spending her holidays with her family.

On examination, she has a fever of 37.5°C and a pulse of 105bpm. She appears slightly disoriented with a tendency to speak out of context but is otherwise cooperative.

There is diplopia on right sided gaze and mild neck stiffness, but the remaining clinical examination is essentially unremarkable.

Lab reports reveal:

Hb	115 g/l
Platelets	340 * 10 ⁹ /l
WBC	9.0 * 10 ⁹ /l

Na ⁺	137 mmol/l
K ⁺	4.2 mmol/l
Urea	5.9 mmol/l
Creatinine	102 µmol/l
Glucose	7.0 mmol/l
ESR	87 mm/hr

MRI shows meningeal enhancement but no evidence of any parenchymal lesions.

CSF examination reveals:

Opening Pressure	Normal
Appearance	Turbid
Protein	3.2g/L (0.2 0.4 g/L)
Glucose	2.7 mmol/l
Lymphocytes	371/mm ³
Neutrophils	42/mm ³
ZN staining	No acid fast bacilli detected

Which of the following is the most appropriate treatment option?

	IV acyclovir
	IV ceftriaxone
	Isoniazid, rifampicin, pyrazinamide and dexamethasone
	IV benzylpenicillin
	Artemether/lumefantrine

Dashboard

Overall score: 0%

1 -

□ Question 87 of 155



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Dashboard

Overall score: 0%

1 -

Question 88 of 155

A 35 year old known HIV positive patient presents with a gradual deterioration in his vision. He states that this has happened over the course of a few weeks. You note from his previous records that he is known to be poorly compliant with his antiretroviral therapy. His most recent CD4 count is 177 cells/mm³. Given the most likely diagnosis, what would be the initial management strategy?

<input type="radio"/>	Oral aciclovir
<input type="radio"/>	Intravenous pentamidine
<input type="radio"/>	Oral pyrimethamine and sulfadiazine, plus folinic acid
<input type="radio"/>	Intravenous ganciclovir
<input type="radio"/>	Oral co-trimoxazole

Dashboard

Overall score: **0%**

1 -

Question 88 of 155

□ □

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	Oral aciclovir
	Intravenous pentamidine
	Oral pyrimethamine and sulfadiazine, plus folinic acid
	Intravenous ganciclovir
	Oral co-trimoxazole

Dashboard

Overall score: **0%**

1 -

Question 88 of 155

A 35 year old known HIV positive patient presents with bilateral periorbital and retro-orbital pain, blurred vision and a central scotoma. The symptoms happened over the course of a few weeks. You note that he is not compliant with his antiretroviral therapy. His most recent CD4 count is 150 cells/mm³. What should be the initial management strategy?



<input type="radio"/>	Oral aciclovir
<input type="radio"/>	Intravenous pentamidine
<input type="radio"/>	Oral pyrimethamine and sulfadiazine, plus
<input checked="" type="radio"/>	Intravenous ganciclovir
<input type="radio"/>	Oral co-trimoxazole

Dashboard

Overall score: **0%**

1 -

□ Question 89 of 155



A 22-year-old Ethiopian female presents on the medical take with an exacerbation of asthma. She has been treated for asthma since her late teens and has generally been well controlled with PRN salbutamol alone and has never required steroids or hospital admission.

She became increasingly breathless 3 days ago and visited her GP who prescribed prednisolone and amoxicillin. However her symptoms have worsened considerably and her FEV1 is now 55% her expected value.

On examination she has a temperature of 37.5°C, a heart rate of 92 beats per minute, a blood pressure of 118/76 mmHg and respiratory rate of 22/min. There is diffuse wheeze across across the chest. You also notice excoriations over the skin from intense scratching.

Investigations:

haemoglobin	102 g/L (130-180)
white cell count	5.4 X 10 ⁹ /L (4.0-11.0)
eosinophil count	0.78 X 10 ⁹ /L (0.04-0.40)
platelet count	478 X 10 ⁹ /L (150-400)
CXR	diffuse patchy infiltrates

What is the most appropriate management?

	Ivermectin and PRN salbutamol nebulisers
	IV Hydrocortisone and PRN salbutamol nebulisers
	IV Antibiotics with PO prednisolone and PRN salbutamol
	IV antibiotics until stable then antiretroviral therapy
	Discuss with ITU with a view to transferring care

Dashboard

Overall score: **0%**

1 -

□ Question 89 of 155



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	IV Hydrocortisone and PRN salbutamol nebulisers
	IV Antibiotics with PO prednisolone and PRN salbutamol
	IV antibiotics until stable then antiretroviral therapy
	Discuss with ITU with a view to transferring care

Dashboard

Overall score: **0%**

1 -

□ Question 90 of 155

□ □

A 44-year-old businessman was admitted to the general medical take with fever, jaundice and headaches. He had returned from a business trip in Hong Kong one month ago. He is a keen river sailor and has been unable to sail for the last two weeks.

On examination he is tachycardic with temperature of 39.5°C. He appears confused and is combative during the examination. His chest has scattered crackles bibasally with some right upper quadrant abdominal pain

Investigations

Hazy lung infiltrates bibasally

Haemoglobin	135 g/L (130180)
White cell count	17.8 × 10 ⁹ /L (4.011.0)
Neutrophil count	15.7 × 10 ⁹ /L (1.57.0)
Platelet count	413 × 10 ⁹ /L (150400)

Serum C-reactive protein	345 mg/L (<10)
Serum urea	13.3 mmol/L (2.57.0)
Serum total bilirubin	110 mol/L (122)
Serum alanine aminotransferase	117 U/L (535)
Serum alkaline phosphatase	110 U/L (45105)
Serum gamma glutamyl transferase	61 U/L (<50)

What is the most likely diagnosis?

	Dengue Fever
	HIV seroconversion

Chest X- Ray		
		Acute hepatitis A
		Malaria
		Leptospirosis
<p>Leptospirosis is the most likely diagnosis. The river sailing puts this gentleman at risk of contact with contaminated water from animal urine. Incubation is between 4-14 days. Typical symptoms include high fever, headache, muscle aches, vomiting and may have meningitis and jaundice.</p> <p>Hong Kong is not a malaria endemic region nor is it a common region for Dengue Fever. HIV seroconversion would not explain jaundice or deranged liver function. Acute Hepatitis A infection is prevalent in Hong Kong and incubation period is between 2 - 6 weeks but infection would not explain the neurological symptoms.</p> <p>Leptospirosis</p> <p>Also known as Weil's disease*, leptospirosis is commonly seen in questions referring to sewage workers, farmers, vets or people who work in abattoir. It is caused by the spirochaete <i>Leptospira interrogans</i> (serogroup L icterohaemorrhagiae), classically being spread by contact with infected rat urine. Weil's disease should always be considered in high-risk patients with hepatorenal failure</p> <p>Features</p> <ul style="list-style-type: none"> • fever • flu-like symptoms • renal failure (seen in 50% of patients) • jaundice • subconjunctival haemorrhage • headache, may herald the onset of meningitis <p>Management</p> <ul style="list-style-type: none"> • high-dose benzylpenicillin or doxycycline <p>*the term Weil's disease is sometimes reserved for the most severe 10% of cases that are associated with jaundice</p> <p>NIL</p> <p>justquestion</p> <p>0</p> <p>ffffffffffffffff</p> <p>16_B_2</p> <p>1_1144</p>		

Dashboard

Overall score: **0%**

1 -

□ Question 91 of 155

□ □

A 40-year-old yoga teacher is reviewed in respiratory clinic following a recent presentation to the emergency department with fever and lethargy. The patient describes a six month history of night sweats, weight loss and progressive reduced exercise capacity that has left him unable to work. During a short admission to hospital he was diagnosed with active pulmonary tuberculosis on the basis of a suggestive chest x-ray and sputum microscopy. He was initiated on standard combination therapy for tuberculosis and discharged for outpatient follow-up.

At clinic, the patient denies feeling any significant improvement in his symptoms. A detailed social history is taken and the patient reports no risk factors for blood-borne viral infections. However, he does report spending 9 months in rural India three years previously as part of his yoga study.

Examination shows the patient to be noticeably cachexic, with a further 3 kg weight loss recorded compared to at the time of hospital admission.

Please see below for results of investigations requested while the patient was an inpatient. Following review of the results, the need for intravenous treatment is explained to the patient.

HIV serum antibody	not detected
HIV serum RNA	not detected

Phenotypic indirect drug susceptibility testing: rifampicin (resistant); ofloxacin (sensitive); moxifloxacin (sensitive); isoniazid (resistant); amikacin (sensitive); kanamycin (sensitive).

What is the appropriate duration of intravenous treatment for this patient?

	9-12 months
	18-24 months
	1-2 months
	6-8 months

Dashboard

Overall score: **0%**

1 -

Question 91 of 155

□ □

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What is the appropriate duration of intravenous treatment for this patient?

9-12 months
18-24 months
1-2 months
6-8 months

3-6 months

Dashboard

Overall score: **0%**

1 -

Question 92 of 155

□ □

A 43-year-old gentleman presents with bloody diarrhoea. He is HIV positive and has a CD4 count of 150 cells/ μ L.

He had been on a trip to Zimbabwe 10 months previously. Over the past 2 weeks, he had symptoms of anorexia and mild abdominal discomfort. These had progressed on to severe abdominal cramps and bloody diarrhoea.

He has a temperature of 37.8°C, a blood pressure of 100/60 and a pulse of 111/min. On examination, he looks unwell, is emaciated and has generalised tenderness on examination of his abdomen. There is no guarding or peritonitis.

What is the most likely causative organism?

	<i>Giardia lamblia</i>
	<i>Toxoplasma gondii</i>
	<i>Entamoeba histolytica</i>
	<i>Cytomegalovirus</i>
	<i>Strongyloides stercoralis</i>

Dashboard

Overall score: 0%

1 -

Question 92 of 155

□ □

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	<i>Cytomegalovirus</i>
	<i>Strongyloides stercoralis</i>

Dashboard

Overall score: **0%**

1 -

Question 93 of 155

□ □

A 37 year old Caucasian male attends an outpatient clinic. He had recently spent three months in Jamaica on a beach-side yoga retreat. He only drank bottled water and ate well cooked vegetarian food. He ensured that any raw vegetables were peeled. He returned home three weeks ago.

During his final week in Jamaica he noticed an itchy spot develop on the side of his ankle. The rash has gradually spread from the original spot slowly 'like a snake up the side of his foot'. The lesion is currently 11cm long and is a raised itchy serpiginous linear lesion.

He is otherwise well.

What is the causative organism?

	<i>Strongyloides stercoralis</i>
	<i>Ancylostoma braziliense</i>
	<i>Necator americanus</i>
	<i>Ascaris lumbricoides</i>
	<i>Schistosomiasis mansoni</i>

Dashboard

Overall score: 0%

1 -

Question 93 of 155

□ □

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Dashboard

Overall score: **0%**

1 -

Question 94 of 155

□ □

A 35-year-old gentleman presents to the emergency department with worsening shortness of breath on exertion. His symptoms have been progressing for two weeks, and he now finds it difficult to take a full breath. He has no chest pain and has not been coughing but he has been feeling increasingly fatigued. He has a past medical history of HIV. He has been struggling to take his tablets recently. He is unsure of the names of any tablets, but he knows that he is supposed to take one tablet each day at the same time and to take two tablets twice a day on Mondays, Wednesdays, and Fridays. He has no other medical problems.

On examination, auscultation shows normal breath sounds.

Observations:

Saturations	93%
Respiratory rate	22/min
Blood pressure	136/71mmHg
Heart rate	91/min
Temperature	37.6°C

On mobilisation, his saturations reduce to 88%.

Chest X-ray is clear.

What investigation is most likely to be diagnostic?

	CT pulmonary angiogram
	High resolution CT chest
	ECG
	Echocardiogram

Dashboard

Overall score: **0%**

1 -

Question 94 of 155

A 35-year-old gentleman presents to the emergency department with worsening shortness of breath on exertion. His symptoms have been progressing for two weeks, and he now finds it difficult to take a full breath. He has no chest pain and has not been coughing but he has been feeling increasingly fatigued. He has a past medical history of HIV. He has been struggling to take his tablets recently. He is unsure of the names of any tablets, but he knows that he is supposed to take one tablet each day at the same time and to take two tablets twice a day on Mondays, Wednesdays, and Fridays. He has no other medical problems.

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Dashboard

Overall score: **0%**

1 -

Question 94 of 155

□ □

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On mobilisation, his saturations reduce to 88%.

Chest X-ray is clear.

What investigation is most likely to be diagnostic?

	CT pulmonary angiogram
	High resolution CT chest
	ECG
	Echocardiogram
	Broncho-alveolar lavage

Dashboard

Overall score: 0%

1 -

Se:2
Im:41

[A]

Study ID: 0007
2:56 PM
MRN

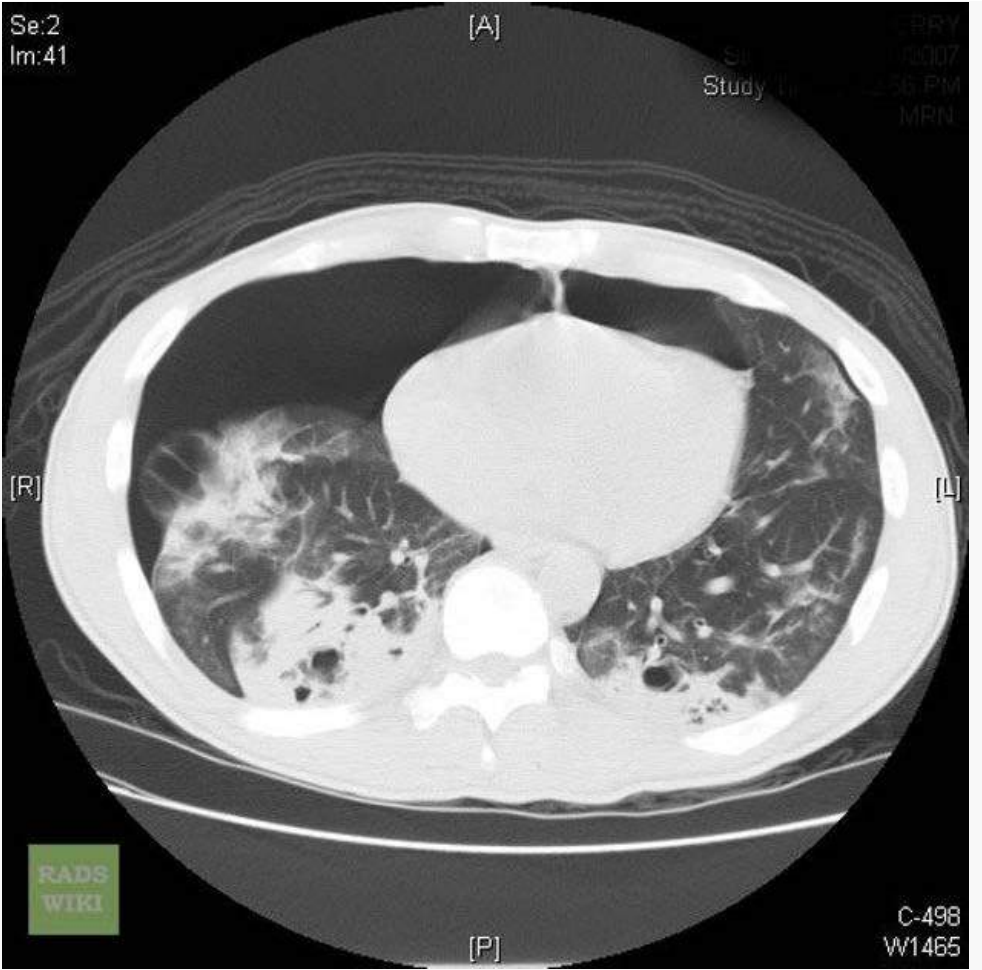
[R]

[L]

RADS
WIKI

[P]

C-498
W1465



Question 95 of 155



A 35-year-old male attends clinic with a new diagnosis of chronic hepatitis B infection. He gives a history of unprotected sex with multiple sexual partners in the two years. His blood tests show him to be HIV, HCV antibody and HBeAg negative. The most recent liver function tests are shown below. On examination, he has no evidence of decompensated liver disease.

Bilirubin	18µmol/L
ALT	52iu/L
AST	38iu/L
ALP	190iu/L
Albumin	30g/L
Protein	93g/L
HBV viral load	2,000IU/mL

Which one of the following treatment options should be considered first line?

	Peginterferon alpha 2a and entecavir
	Entecavir
	Peginterferon alpha 2a
	Tenofovir disoproxil
	Entecavir and tenofovir disoproxil

Overall score: **0%**

1 -

□ Question 95 of 155

□ □

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	Entecavir and tenofovir disoproxil

Overall score: **0%**

1 -

□ Question 96 of 155



A 46-year-old Ghanaian woman was flying from Ghana to San Francisco, USA when she was noticed to be confused and behaving inappropriately on the plane. She was talking loudly to herself, complaining of a headache, and also appeared to be hearing voices. She had one episode of incontinence on the plane. During the transit in London, she was brought to the nearest hospital for investigations.

On examination, she was drowsy and slow to respond to questions. Her temperature was 37.3°C, heart rate of 98 bpm, blood pressure of 138/92 mmHg, respiratory rate of 16, and oxygen saturations were 100% on air. Her pupils were 3mm bilaterally, equal and reactive. Her neck was supple and there was mild photophobia. Her abbreviated mental test score was 6/10.

Her investigations revealed:

C Reactive protein	24 mg/l
Haemoglobin	128 g/l
White cell count	$11.6 \times 10^9/L$
HIV antibody serology	positive
HIV viral load	19000 copies/ml
CD4+ T lymphocyte count	35 cells/mm ³
Na+	136 mmol/l
K+	4.9 mmol/l
Urea	7.2 mmol/l
Creatinine	108 µmol/l
Corrected calcium	2.32 mmol/l
Plasma glucose	5.8mmol/l

Chest X-Ray: Lung fields clear

Computer Tomography (CT) head scan: Hypodense lesions involving the medial temporal regions. Lesions enhance with contrast.

Cerebro-spinal fluid (CSF) analysis:

Opening pressure	20 cmH2O
Protein	1.2 g/L
White cell count	50 per mm ³ (predominantly mononuclear cells)
Red cell count	5 per mm ³
Glucose	4.8 mmol/l
Gram stain	No organisms seen

What is the next most appropriate management step?

	Intravenous acyclovir
	Oral prednisolone
	Highly Active Anti-Retroviral Therapy (HAART)
	Intravenous fluconazole
	Pyrimethamine and Sulfadiazine

Dashboard

Overall score: 0%

1 -

Question 96 of 155



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□ Question 96 of 155

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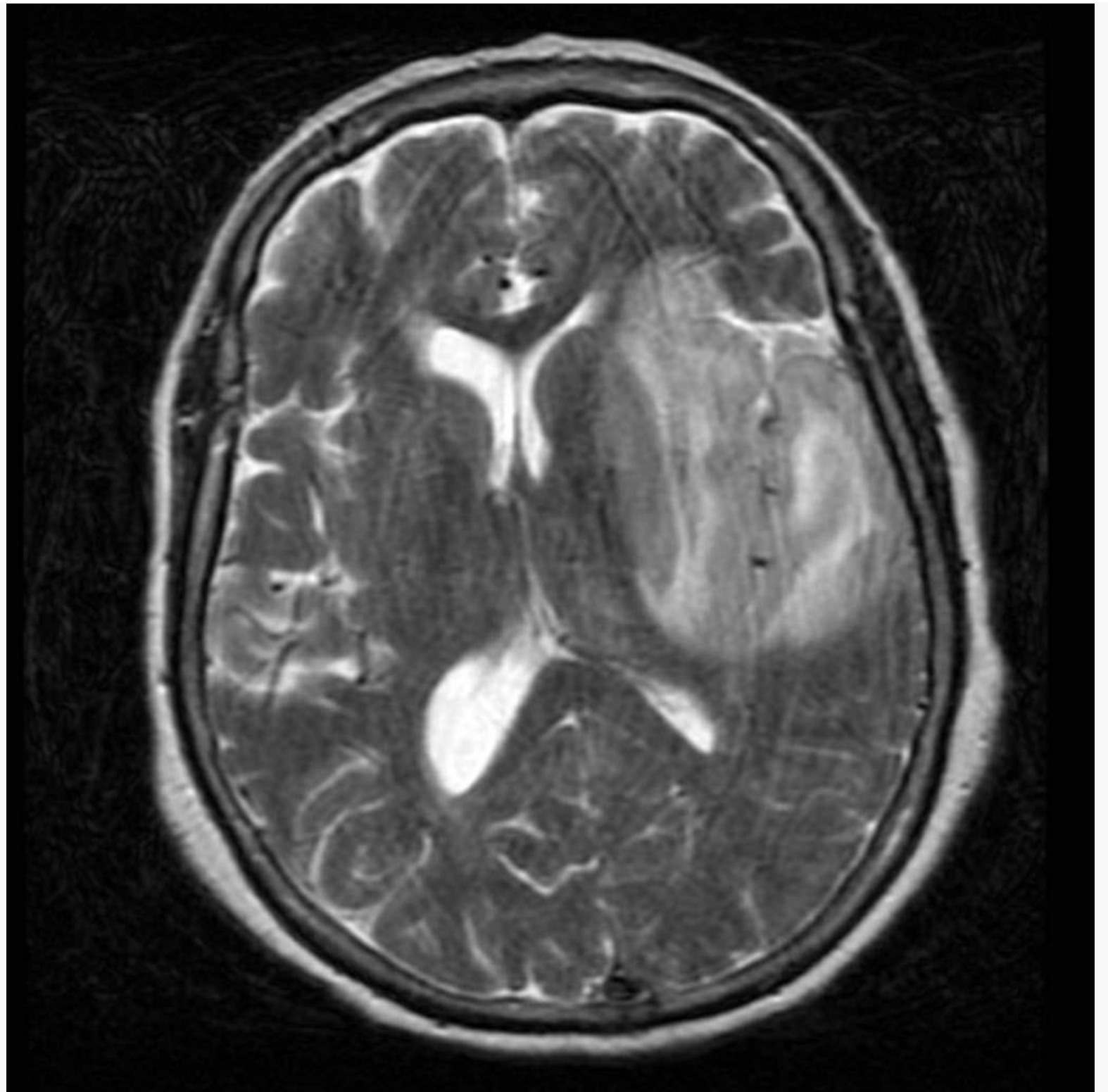
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Dashboard

Overall score: **0%**

1 -



□ Question 97 of 155

□ □

A 23-year-old student presented to his GP with fever and epistaxis. The fever had started 6 days earlier. It had been associated with a headache and malaise. Following clinical examination his doctor prescribed him amoxicillin which he took for 3 days but without any improvement. He later became so ill that he refused to eat and started to vomit.

His history included mumps at the age of nine. His father had been diagnosed with liver cirrhosis 2 years ago due to excessive alcohol consumption. He is a regular smoker for the last 10 years and lives in the dorm. Two weeks earlier he had been in rural Central Africa as a reporter covering the conflict there. He denied being vaccinated for any disease before going there but did take anti-malarial tablets.

On examination he appeared ill. His temperature was 38°C. He was jaundiced. Eye examination revealed conjunctival hemorrhages on both eyes. All other systems were normal.

The following investigations had been requested:

Hb	13 g/dl
platelets	$170 \times 10^9/l$
WBC	$4 \times 10^9/l$
MCV	85 fl
MCH	0.4 fmol/cell
MCHC	20 mmol/l
Na+	135 mmol/l
K+	4 mmol/l
Creatinine	80 $\mu\text{mol/l}$
Urea	3 mmol/l
ESR	60 mm/hr
Alkaline phosphatase	100 IU/l

Alanine transaminase	400 IU/l
Aspartate transaminase	200 IU/l
Bilirubin	25 µmol/l (direct 18 umol/l)
Serum albumin	40 g/l
Prothrombin time	prolonged
Partial thromboplastin time	prolonged
Urine analysis	Albumin + ,acetone ++ ,bile pigment ++ ,urinary urobilinogen +
Thick Blood film for malaria	negative

What is the most likely diagnosis?

<input type="radio"/>	Yellow fever
<input type="radio"/>	Primary sclerosing cholangitis
<input type="radio"/>	Leptospirosis
<input type="radio"/>	Falciparum malaria
<input type="radio"/>	Dengue fever

Dashboard

Overall score: **0%**

1 -

□ Question 97 of 155



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Creatinine	80 μ mol/l
Urea	3 mmol/l
ESR	60 mm/hr
Alkaline phosphatase	100 IU/l

Alanine transaminase	400 IU/l
Aspartate transaminase	200 IU/l
Bilirubin	25 µmol/l (direct 18 µmol/l)
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Prothrombin time	prolonged
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What is the most likely diagnosis?

	Yellow fever
	Primary sclerosing cholangitis
	Leptospirosis
	Falciparum malaria
	Dengue fever

Dashboard
Overall score: 0% 1 -

Question 98 of 155

A 27-year-old man who recently immigrated to the UK from Ethiopia complains of a chronic cough with night sweats for five weeks. On direct questioning, he also admits coughing up small volumes of bright red blood a few times. This has made him especially concerned as he his father died from lung related problems following chronic coughs.

Following a chest X-ray and blood tests he is diagnosed with TB and contact tracing is started. His 25-year-old male partner lives with him and is identified as being at high risk of contracting TB. The partner undergoes Mantoux testing and has a 2mm area of induration. He has never had BCG vaccination as far as he is aware and has no vaccination scar. What is the most appropriate management that should be offered to the partner?

	BCG vaccination
	HIV testing and if negative then BCG vaccination
	Prophylactic anti-TB treatment
	Repeat TB screening in six weeks
	No further management needed

Dashboard

Overall score: 0%

1 -

Question 98 of 155

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	BCG vaccination
	HIV testing and if negative then BCG vaccination
	Prophylactic anti-TB treatment
	Repeat TB screening in six weeks
	No further management needed

Dashboard

Overall score: 0%

1 -

Question 98 of 155

A 27-year-old man who recently immigrated to the UK five weeks. On direct questioning, he also admits cocaine use. He is especially concerned as his father died of tuberculosis.

Following a chest X-ray and blood tests he is diagnosed with latent tuberculosis. His partner lives with him and is identified as being at high risk. He has a 2mm area of induration. He has never had a TB scar. What is the most appropriate management for this patient?

<input type="radio"/>	BCG vaccination
<input checked="" type="radio"/>	HIV testing and if negative then BCG vaccination
<input type="radio"/>	Prophylactic anti-TB treatment
<input type="radio"/>	Repeat TB screening in six weeks
<input type="radio"/>	No further management needed



Dashboard

Overall score: 0%

1 -

Question 99 of 155



A 38 year-old woman presented to the medical outpatient clinic with an 8 month history of deteriorating vision. She also complained of a pruritic rash intermittently affecting her forearms and neck. She had recently migrated to the UK from Guinea, where she had lived since birth. She had suffered from malaria as a child but had been fit and well since. She did not smoke and drank 6-10 units of alcohol per week.

On examination, her temperature was 36.7°C, pulse was 68 beats per minute and blood pressure was 124/80 mmHg. Her chest was clear on auscultation and heart sounds were normal. Fundoscopy was not possible due to clouding of both corneas. There was evidence of a mottled rash over the forearms and neck with a leopard print appearance.

Investigations:

Haemoglobin	141 g/L (130-180)
White cell count	6.7 x ⁹ /L (4.0-11.0)
Neutrophil count	3.0 x ⁹ /L (2.0-7.5)
Lymphocyte count	1.7 x ⁹ /L (1.3-3.5)
Eosinophil count	0.6 X ⁹ /L (0.1-0.4)
Platelets	260 x ⁹ /L (150-400)

Sodium	138 mmol/L (135-145)
Potassium	4.3 mmol/L (3.5-5.0)
Urea	7.2 mmol/L (2.5-7.5)
Creatinine	61 mol/L (25-95)
Fasting plasma glucose	5.0 mmol/L (3.0-6.0)

Giemsa-stained blood film	No abnormality detected
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Given the likely diagnosis, what is the most appropriate treatment?

	Diethylcarbamazine (DEC)
	Ivermectin
	Benzinidazole
	Albendazole
	Praziquantel

Dashboard

Overall score: 0%

1 -

□ Question 99 of 155



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Dashboard

Overall score: 0%

1 -

Question 100 of 155

□ □

A 47-year-old man is referred by the emergency department with increasing shortness of breath. He is a known HIV patient managed by the local GUM consultants. He is not on any antiretroviral treatment. He presents with a two-week history of worsening shortness of breath. He is now breathless on minimal exercise. He has a non-productive cough and has felt lethargic for the last week. On examination he is afebrile, his blood pressure is 120/89 mmHg and he is slightly tachycardic at 110bpm. His respiratory rate is 18 at rest with saturations on 98% on air. When he mobilises to the toilet he becoming very tachypnoeic and his saturations drop to 90%. His blood tests are as follows:

Hb	110 g/l
Platelets	201 * 10 ⁹ /l
WBC	9.6 * 10 ⁹ /l
Neutrophils	4.5 * 10 ⁹ /l

Na ⁺	138 mmol/l
K ⁺	4.1 mmol/l
Urea	7.8 mmol/l
Creatinine	20 µmol/l
CRP	70 mg/l

Bilirubin	5 µmol/l
ALP	89 u/l
ALT	43 u/l
Albumin	34 g/l

An ABG is done which shows

pH	7.35
pO2	7.7
pCO2	4.6
HCO3-	21
BE	-3
Lactate	2.2

His chest x-ray shows fine bilateral reticular nodular shadowing.

What is the most appropriate treatment to start in this gentleman?

	Tazocin
	Co-trimoxazole
	Aciclovir
	Co-trimoxazole and corticosteroids
	Highly active anti-retroviral treatment

Dashboard

Overall score: 0%

1 -

Question 100 of 155

□ □

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Dashboard
Overall score: 0% 1 -

□ Question 100 of 155

□ □

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Dashboard
Overall score: 0% 1 -

Se:2
Im:41

[A]

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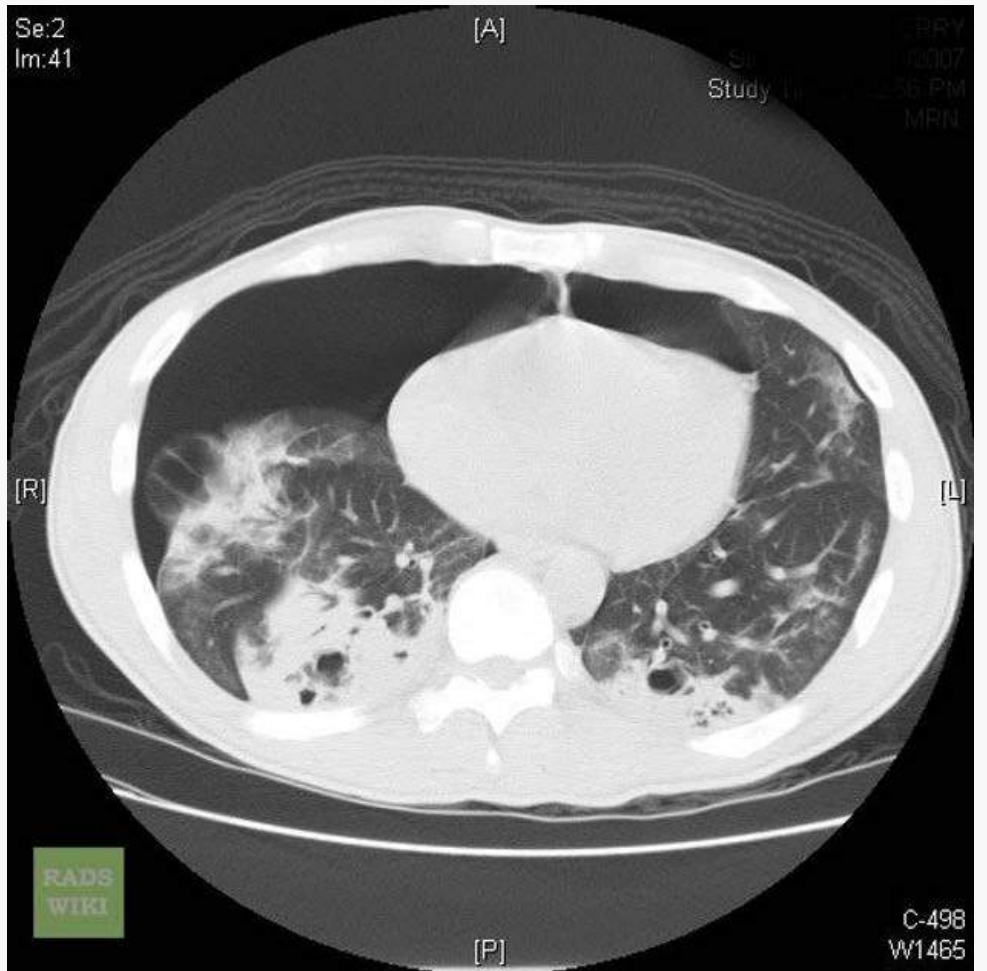
[R]

[L]

RADS
WIKI

[P]

C-498
W1465



Question 101 of 155

□ □

A 42-year-old gentleman is reviewed in hepatitis clinic. He has recently been diagnosed with hepatitis B following sexual health screening. Currently, his liver function is normal and he has no other medical problems. He is concerned about developing cirrhosis of the liver. What marker is most useful in determining his risk for developing cirrhosis from hepatitis B?

	Hepatitis B surface antibody
	Hepatitis B core antibody
	Hepatitis B core antigen
	Hepatitis B DNA levels
	Hepatitis B e antibody

Dashboard

Overall score: 0%

1 -

Question 101 of 155

□ □

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	Hepatitis B surface antibody
	Hepatitis B core antibody
	Hepatitis B core antigen
	Hepatitis B DNA levels
	Hepatitis B e antibody

Dashboard

Overall score: **0%**

1 -

□ Question 102 of 155



An 80-year-old lady presents from a nursing home with a one-day history of fevers, drowsiness and vomiting. She has been unwell, not eating for the past 3 days according to her carer. Recently she has been exhibiting behavioural changes, crying and agitation when lights are turned on in the room, and holding her neck. She has a back ground of Alzheimer's dementia, hypertension, congestive cardiac failure(CCF) and chronic kidney disease.

On examination, she is febrile with a temperature of 38.1oC. Heart rate 112bpm, respiratory rate 20breaths per minute and oxygen saturations of 94% on air. On auscultation, there are bibasal crepitations and cardiovascular examination is consistent with mild CCF. There is neck stiffness and photophobia on cranial nerve examination, pupils equal and reactive to light. Kernig's sign is positive.

Investigations:

Na+	129mmol/l
K+	4.8 mmol/l
Urea	10.9 mmol/l
Creatinine	123 µmol/l
Serum glucose	5.9mmol/l
C Reactive protein	95mg/l
Haemoglobin	126 g/l
White cell count	16.4 x 10 ⁹ /L
INR	1.2

Cerebro-spinal fluid (CSF) analysis:

Opening pressure	25 cmH2O
Protein	1.8 g/L
Glucose	2.6 mmol/l

White cell count	>1000 per mm ³
Gram Stain	Gram-positive rods seen
Colour	Cloudy, turbid

What is the likely causative organism?

	<i>Streptococcus pneumoniae</i>
	<i>Listeria monocytogenes</i>
	<i>Staphylococcus aureus</i>
	<i>Neisseria meningitidis</i>
	<i>Haemophilus influenzae</i>

Dashboard

Overall score: **0%**

1 -

□ Question 102 of 155



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	<i>Neisseria meningitidis</i>
	<i>Haemophilus influenzae</i>

Dashboard
<p>Overall score: 0%</p> <p>1 -</p>

Question 103 of 155

□ □

A 72-year-old male diabetic is admitted to the hospital via the Emergency Department with severe cellulitis of his right arm. He is hypertensive and also suffers from coronary artery disease.

On examination he is febrile, with a temperature of 38.5°C. His pulse is 112 bpm and his blood pressure is 150/95 mmHg.

His right arm is grossly swollen and tender, with marked erythema and discharge of small amounts of pus.

Lab reports reveal:

Hb	90 g/l
MCV	71 fl
WBC	23 * 10 ⁹ /l
Plt	500 * 10 ⁹ /l
Urea	9.2 mmol/l
Creatinine	145 µmol/l

Urine examination reveals proteinuria 1+ and glycosuria 2+

Preliminary blood cultures post admission reveal the growth of MRSA.

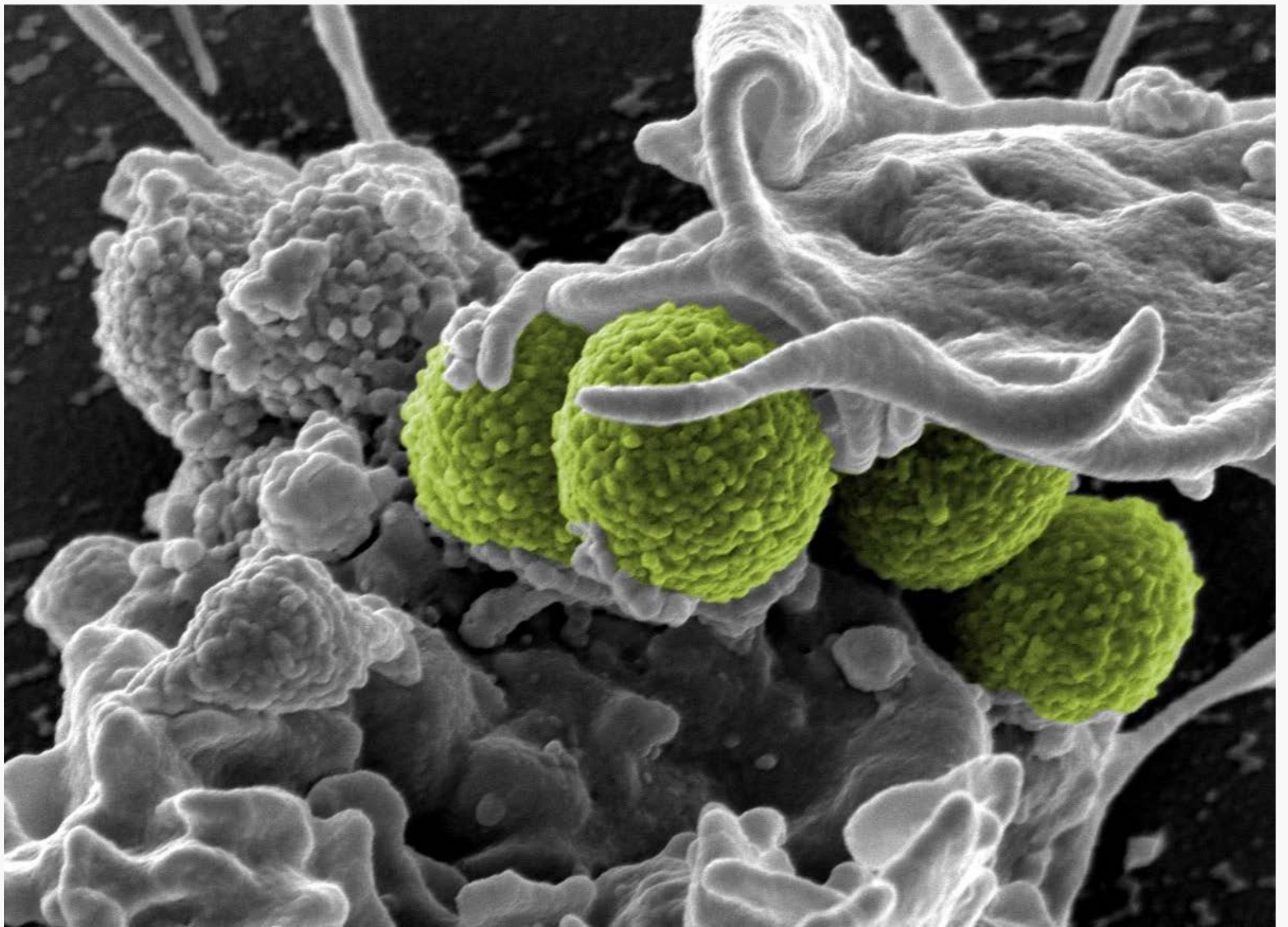
Which of the following would be the most appropriate antibiotic for this patient?

	IV Vancomycin
	IV Flucloxacillin
	IV Linezolid
	IV Rifampicin

	IV Gentamicin
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Dashboard

Overall score: **0%**
1 -



Question 103 of 155

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	IV Flucloxacillin
	IV Linezolid

	IV Rifampicin
	IV Gentamicin

Dashboard

Overall score: **0%**
1 -

Question 103 of 155

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	IV Flucloxacillin
	IV Linezolid

	IV Rifampicin
	IV Gentamicin

Dashboard

Overall score: **0%**
1 -

Question 104 of 155

A 45 year old man presents to the Emergency Department. He told the admitting doctor that he had fallen onto his left hip last night whilst he had been drinking at home. He had extensive bruising around his hip and some bony tenderness and so a hip x-ray was taken.

His x-ray shows no fracture nor bony abnormality, but several 2x4mm specs of calcification are visible in his psoas and thigh muscles.

Later on his wife asks to speak to you in confidence. She states that over the last year her husbands personality has gradually changed and he is sometimes forgetful. He lost his job 3 months ago as an engineer. He had worked for 8 years in Peru on an engineering project in his thirties. He drinks 8 units of alcohol per day and seems to have had a low mood for several years.

Yesterday he had fallen, lost consciousness, and had a jerking of his arms and legs lasting 1 minute. He had hit his hip on a coffee table and had wet himself. Afterwards he felt tired and lethargic but had refused to go to hospital.

What is the most likely diagnosis?

	HIV dementia
	Alcohol withdrawal seizure
	Neurocysticercosis
	Emboli secondary to calcified aortic valve
	Primary idiopathic epilepsy

Dashboard

Overall score: 0%

Question 104 of 155

□ □

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What is the most likely diagnosis?

	HIV dementia
	Alcohol withdrawal seizure
	Neurocysticercosis
	Emboli secondary to calcified aortic valve
	Primary idiopathic epilepsy

Dashboard

Overall score: **0%**

Question 105 of 155

□ □

A 22 year old male attends the Genitourinary Medicine clinic which you are working in. He was contacted and asked to attend having been in direct, recent sexual contact with gonorrhoea. He is asymptomatic. What is the best course of action?

	No action required as he is asymptomatic
	Treat with ceftriaxone and azithromycin, perform a sexual health screen and call back for a test of cure if positive
	Give ceftriaxone and azithromycin, no need for a screen
	Perform a screen and call back to treat if positive
	Give ceftriaxone, perform a screen, and call back to give azithromycin if positive

Dashboard

Overall score: 0%

1 -

Question 105 of 155

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	Give ceftriaxone, perform a screen, and call back to give azithromycin if positive

Dashboard

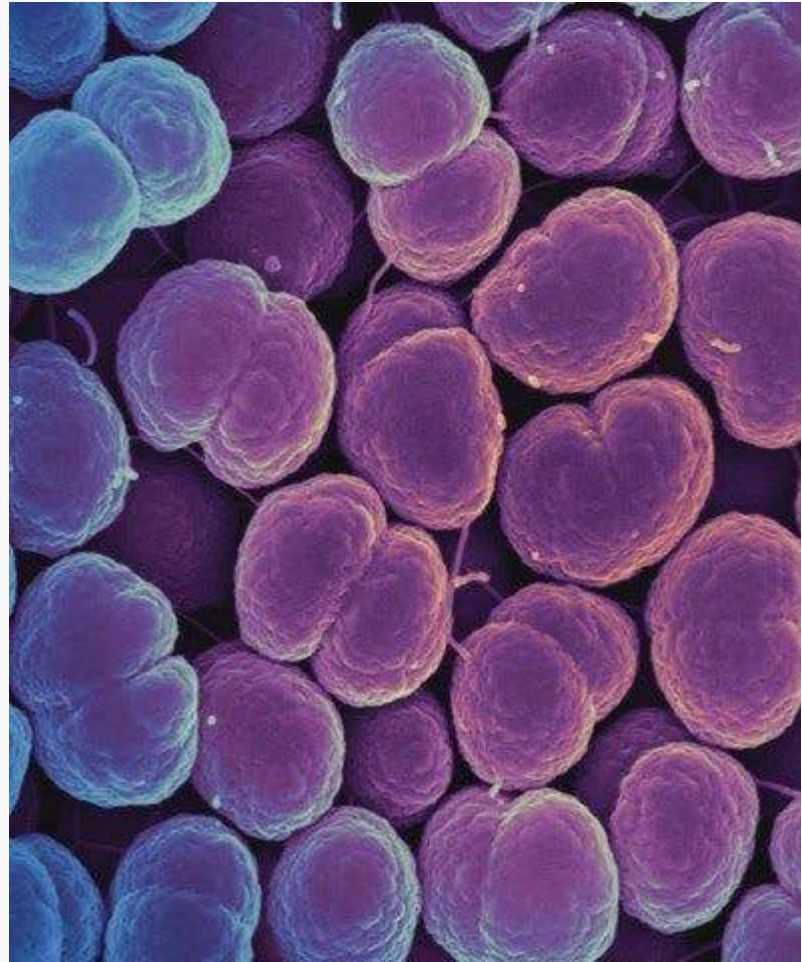
Overall score: **0%**

1 -

Question 105 of 155

A 22 year old male attends the Genitourinary Medicine clinic having been in direct, recent sexual contact with a partner who is positive for chlamydia. What is the best course of action?

<input type="radio"/>	No action required as he is asymptomatic
<input checked="" type="radio"/>	Treat with ceftriaxone and azithromycin, perform a screen for gonorrhoea if positive
<input type="radio"/>	Give ceftriaxone and azithromycin, no need for a screen
<input type="radio"/>	Perform a screen and call back to treat if positive
<input type="radio"/>	Give ceftriaxone, perform a screen, and call back to give azithromycin if positive



Dashboard

Overall score: **0%**

1 -

Question 106 of 155

□ □

A young 27 year-old man who has been travelling on a jungle expedition across south east Asia presents to the local doctors with a 3 day history of fever, headache and a widespread maculopapular rash. He has been kayaking through rivers, trekking through long grass and jungle, and he reports being bitten by mosquitos, flies and mites. On close inspection he has a black necrotic eschar on his leg. A malaria rapid diagnostic test (RDT) is negative.

What is the most appropriate management?

	Artemether / lumefantrine
	Benzympenicilin
	Corticosteroids
	Doxycycline
	Supportive care

Dashboard

Overall score: 0%

1 -

Question 106 of 155

□ □

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1 -

□ Question 106 of 155

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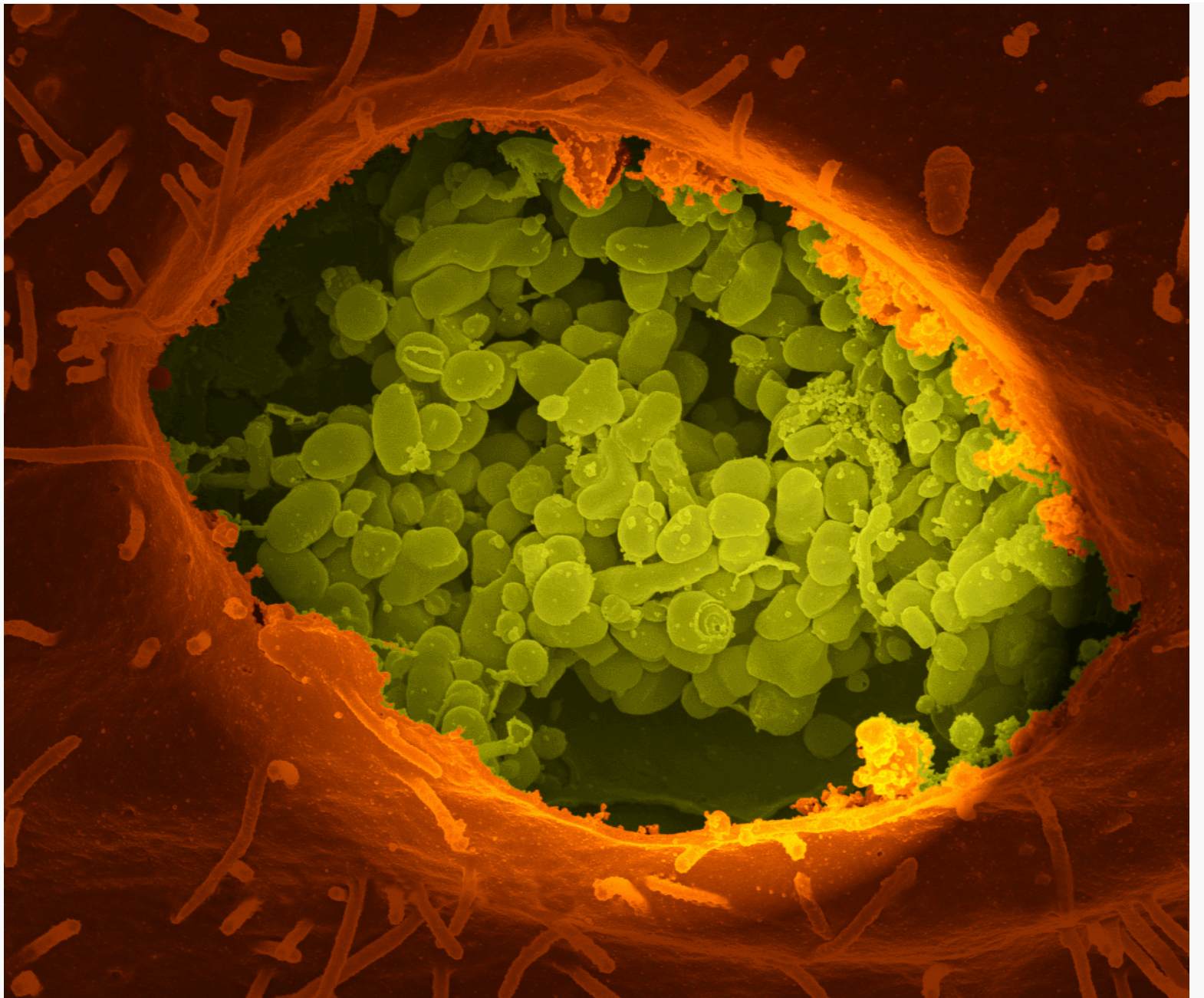
What is the most appropriate management?

	Artemether / lumefantrine
	Benzylpenicilin
	Corticosteroids
	Doxycycline
	Supportive care

Dashboard

Overall score: 0%

1 -



Question 107 of 155

□ □

A 23-year-old man presents to the emergency department with a fever and a rash having recently returned back from a back-packing trip in rural Thailand where he had been trekking. He complains of general malaise for the last few days, a frontal headache and a rash he has noticed from last night. On examination he had tender cervical lymphadenopathy and a maculopapular rash over his trunk. There was also a small painless erythematous lesion on his lower calf with a necrotic centre.

Hb	95 g/l
Platelets	$60 \times 10^9/l$
WBC	$2.5 \times 10^9/l$

What is the most likely diagnosis?

	Malaria
	Dengue fever
	Scrub typhus
	Leptospirosis
	HIV conversion illness

Dashboard

Overall score: 0%

1 -

Question 107 of 155

□ □

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	Malaria
	Dengue fever
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	Leptospirosis
	HIV conversion illness

Dashboard

Overall score: **0%**

1 -

Question 108 of 155

□ □

A 48-year-old farmer presents with a four-day history of headache, pyrexia and vomiting. He has recently been undergoing chemotherapy for mantle cell lymphoma and successfully completed his fourth cycle three days ago. During his treatment, he has tried to maintain an active lifestyle and has continued to work on his dairy farm. He has no other past medical history, he does not smoke or drink. On examination, the patient is drowsy and pyrexia at 38.6 degrees. You note no rashes on his skin. He displays neck stiffness and photophobia. You are unable to formally perform a neurological examination but you note no obvious facial asymmetry and the patient is moving all four limbs. Both plantars are downgoing.

Blood tests are as follows:

Hb	98 g/l
Platelets	$78 \times 10^9/l$
WBC	$0.9 \times 10^9/l$
Neutrophils	$0.3 \times 10^9/l$

Na ⁺	146 mmol/l
K ⁺	4.3 mmol/l
Urea	8 mmol/l
Creatinine	99 μ mol/l
CRP	170 mg/l

A lumbar puncture is performed and the cerebrospinal fluid examination is as follows:

WCC	$200 \times 10^6/litre$ (70% neutrophil 25% lymphocytes)
RBC	$4 \times 10^6/litre$
Glucose	1.7 mmol/l (normal 3.3-4.4 mmol/l)

Microscopy	No organisms on gram stain
Appearance	cloudy

The patient is immediately commenced on intravenous ceftriaxone for suspected bacterial meningitis. At 48 hours after initial admission, blood and cerebrospinal fluid cultures are still awaited. The patient has demonstrated no change in clinical state. What is an appropriate additional therapy?

	Hourly neurological monitoring
	Intravenous acyclovir
	Intravenous ampicillin
	Intravenous rifampicin
	Intravenous amphotericin B

Dashboard

Overall score: **0%**

1 -

Question 108 of 155

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Dashboard

Overall score: **0%**

1 -

Question 109 of 155

□ □

A 32 year old man presents with left lower limb weakness for the past three weeks. Over the past week his condition has got much worse. He has lost his appetite and about six kilograms in the last two months. In the same period he reported recurrent bleeding from the nose.

With the help of three months of nicotine transdermal patches and vareniciline he is now no longer actively smoking. He is married and works as a salesman in a pharmaceutical company. For the last year he has been to many destinations around the world as part of his job.

On examination he appeared ill. He was oriented in time, place, and person, but was mentally slow in understanding commands during examination. The power in the left leg was grade 2 for all muscle groups. Tone, sensation, coordination and reflexes were all normal. The right leg was normal. No abnormality detected in other systems. The following investigation were ordered:

Hb	10g/dl
Platelets	$10 \times 10^9/l$
WBC	$4 \times 10^9/l$
Neutrophils	60%
Lymphocytes	34%
Na ⁺	135 mmol/l
K ⁺	4 mmol/l
Creatinine	95 μ mol/l
Urea	4 mmol/l

Urine analysis: Clear

MRI brain showed bilateral multiple hyperintense demyelinating lesions involving sub cortical areas without any mass effect.

What is the most appropriate thing to do?

	CSF analysis for oligoclonal bands
	Brain biopsy
	CSF analysis for herpes simplex virus (HSV)
	HIV test
	Stop vareniciline

Dashboard

Overall score: 0%

1 -

Question 109 of 155

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1 -



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7



W 114 : L 51

Question 109 of 155

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	Brain biopsy
	CSF analysis for herpes simplex virus (HSV)
	HIV test
	Stop varenicline

Dashboard

Overall score: 0%

1 -



Question 110 of 155

□ □

A 54-year old oil businessman who frequently visits the Gambia and is usually careful with his malaria prophylaxis has been admitted with general malaise and relapsing/remitting fevers which seem to occur every third day. He returned from the Gambia about one week ago and on this occasion he did not take his malaria prophylaxis as he has never caught it before. He has no past medical history of note and no regular medication. Malarial parasites are seen on the thick and thin films and it is confirmed as *Plasmodium vivax* by the Malaria Reference Laboratory.

What is the most appropriate management according to current UK guidelines?

	Chloroquine
	Atovaquone-proguanil
	Chloroquine and primaquine
	Artemether with lumefantrine
	Intravenous artesunate + primaquine

Dashboard

Overall score: 0%

1 -

Question 110 of 155

□ □

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	Intravenous artesunate + primaquine

Dashboard

Overall score: **0%**

1 -

Question 111 of 155

□ □

A 52-year-old male presents with a cough, fatigue, fever, and shortness of breath. He had been feeling unwell for around 6 months with recurrent colds that he couldn't seem to shake off. Over this period he had lost around one and a half stone in weight. He attributed this to a poor appetite. His only past medical history was asthma. He had been a widower for 7 years and was a keen wildlife photographer which had allowed him to travel the world. His last trip had been to Africa 2 years ago.

On examination he had a temperature of 38.2°C, heart rate is 102/min and regular, blood pressure 110/70 mmHg and saturations 92% air. He had fine bibasal crackles on chest auscultation. Heart sounds were normal. Arterial blood gas showed a type 1 respiratory failure. Chest x-ray showed bilateral pulmonary infiltrates. He was treated with intravenous antibiotics. After two days of admission, his condition worsened and his type 1 respiratory failure worsened and he was given continuous positive airway pressure (CPAP). The beta glucan test came back negative. Urinary antigens were negative. The patient remarked that he had noted that his vision in his right eye was blurred and he had noted flashing lights and spots in the same eye.

What is the most likely diagnosis?

	Pneumocystis pneumonia
	CMV pneumonia
	Fungal pneumonia
	Legionella pneumonia
	Asthma exacerbation

Dashboard

Overall score: 0%

1 -

Question 111 of 155

□ □

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Dashboard

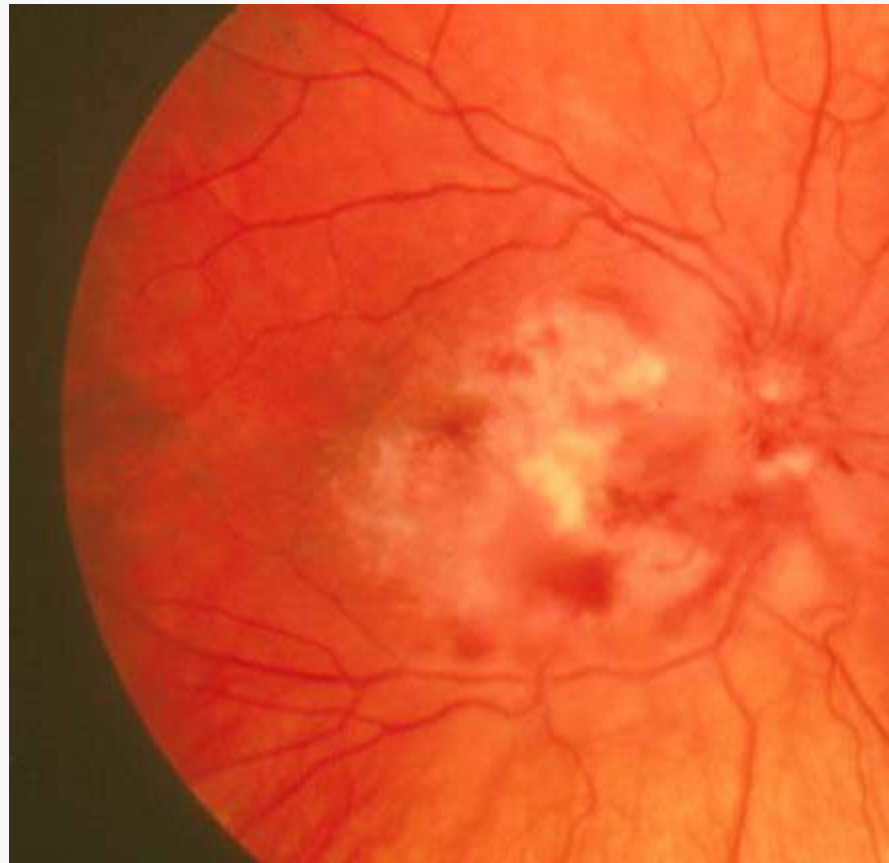
Overall score: 0%

1 -

□ Question 111 of 155

A 52-year-old male presents with a cough, fatigue, around 6 months with recurrent colds that he could half stone in weight. He attributed this to a poor appetite. He is a widower for 7 years and was a keen wildlife photographer. He has been to Africa 2 years ago.

On examination he had a temperature of 38.2°C, heart rate 100 bpm, oxygen saturations 92% air. He had fine bibasal crackles on auscultation. He showed a type 1 respiratory failure. Chest x-ray showed bilateral perihilar opacities. He was given antibiotics. After two days of admission, his condition improved. He was given continuous positive airway pressure (CPAP). His oxygen saturations were negative. The patient remarked that he had noted floaters and spots in the same eye.



What is the most likely diagnosis?

<input type="radio"/>	Pneumocystis pneumonia
<input checked="" type="radio"/>	CMV pneumonia
<input type="radio"/>	Fungal pneumonia
<input type="radio"/>	Legionella pneumonia
<input type="radio"/>	Asthma exacerbation

Dashboard

Overall score: 0%

1 -

Question 112 of 155

□ □

A 36-year-old Somali male presents on the medical take with a severe generalised headache associated with nausea and vomiting. He has been living in the UK for the last 10 years. He was diagnosed with HIV 5 years ago and has been well maintained on therapy with an undetectable viral load and a CD4 count of 500 cells/mm³.

He has a long history of headaches since the age of 10 which are normally controlled with simple analgesia. Over the last 2 days he has been suffering with a particularly bad attack which culminated in him becoming aggressive and vomiting profusely. He was noted to have a tonic-clonic seizure whilst in accident and emergency which resolved with diazepam.

Clinical examination reveals a pulse of 78 beats per minute, a blood pressure of 130/90, oxygen saturations of 98% on air and a temperature of 36.8 degrees. There was no focal neurological defects.

A CT scan subsequently showed cystic and calcified lesions within the brain and mild hydrocephalus.

What is the most likely diagnosis?

	Tuberculous meningitis
	Cryptococcal meningitis
	Lymphoma
	Neurocysticercosis
	Human african trypanosomiasis

Dashboard

Overall score: 0%

1 -

Question 112 of 155

□ □

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What is the most likely diagnosis?

	Tuberculous meningitis
	Cryptococcal meningitis
	Lymphoma
	Neurocysticercosis
	Human african trypanosomiasis

Dashboard

Overall score: 0%

1 -

□ Question 113 of 155

□ □

A 19 year-old University student presented to her General Practitioner with a three month history of intermittent diarrhoea and anorexia. She had lost approximately 10 kg of weight over a similar period. The patient had no previous abdominal symptoms and no significant past medical history. The symptoms had started several weeks after her return from a gap year expedition to Mali. On close questioning the patient did recall a short-lived intensely itchy erythematous rash on one of her feet while she was in Africa. This had spontaneously resolved and not subsequently recurred.

Initial investigations are listed below:

Hb	12.8 g/dl
Platelets	$198 \times 10^9/l$
WBC	$10.8 \times 10^9/l$
Neutrophils	$5.2 \times 10^9/l$
Lymphocytes	$2.1 \times 10^9/l$
Monocytes	$0.8 \times 10^9/l$
Eosinophils	$2.7 \times 10^9/l$
Basophils	$0.0 \times 10^9/l$

Na ⁺	136 mmol/l
K ⁺	4.2 mmol/l
Urea	3.9 mmol/l
Creatinine	78 μ mol/l

Stool microscopy: *Strongyloides stercoralis* larvae
Strongyloides stercoralis filariform larvae IgG: positive

Under supervision from Infectious Disease department the patient was treated with Ivermectin.

What is the best method to assess for *Strongyloides stercoralis* eradication six months after completion of treatment course?

	Repeat blood eosinophil count
	Assessment of patient symptoms
	Repeat <i>Strongyloides stercoralis</i> serology
	Repeat stool microscopy on two occasions one week apart
	Repeat stool microscopy with stool concentration technique

Dashboard

Overall score: 0%

1 -

□ Question 113 of 155

□ □

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	Repeat stool microscopy with stool concentration technique

Dashboard

Overall score: 0%

1 -

□ Question 114 of 155



A 32-year-old woman attends the infectious diseases clinic for an urgent review. The patient had presented to the emergency department the previous weekend complaining of various constitutional symptoms. A set of blood cultures had been taken as the patient was febrile at presentation. Assessment in the emergency department had not identified a clear cause for the patient's illness and she had been discharged home with advice to attend her GP surgery if her symptoms did not resolve in the coming days. The patient had been recalled to hospital for review after the blood cultures taken during her presentation yielded a positive result. Selected investigation results from the patient's emergency department attendance are given below.

At her review appointment, the patient recounted her recent symptoms. She described a 3-week history of intermittent fever, malaise and reduced appetite. On direct questioning, she did recall experiencing excessive overnight sweating on a few occasions but had not experienced joint pains. The patient denied other symptoms, including those associated with the respiratory, urinary tract and neurological systems.

The patient was otherwise healthy, with no significant past medical history. She took no regular medications and had no known medication allergies. The patient was a chartered accountant and lived with her husband and 5-year-old daughter. The patient had returned from a holiday in Turkey 4 weeks previously. During her holiday she had visited relatives in a rural village and recalled consuming local dairy products that she suspected had not been pasteurised.

On general examination, the patient appeared to be tired and pale. Examination of the patient's abdomen revealed palpable hepatomegaly and splenomegaly. Examinations of the respiratory, cardiovascular, neurological and musculoskeletal systems were unremarkable. Selected investigation results from the patient's emergency department attendance are given below.

Haemoglobin	117 g / dL
White cell count	3.9×10^9 / microlitre
Neutrophils	2.1×10^9 / microlitre (reference 1.8-7.8)
eGFR	> 90 ml / min / 1.73 m ²
Alkaline phosphatase	134 U / L (reference 35-100)
ALT	57 U / L (reference 3-36)
Bilirubin	24 micromol / L (reference < 26)

C-reactive protein	68 mg / L (reference < 7)
Urine dipstick	No abnormality detected
Blood cultures	Small gram-positive coccobacilli; consistent with <i>Brucella</i> species
Chest x-ray	Clear lung fields; no evidence of consolidation or effusion

The likely diagnosis of Brucellosis was discussed with the patient. She expressed a very strong preference to receive treatment on an outpatient basis so that she would not be separated from her family.

What is the appropriate treatment regime?

<input type="radio"/>	Doxycycline monotherapy for 2 weeks
<input type="radio"/>	Proguanil with atovaquone for 3 days
<input type="radio"/>	Clarithromycin and amoxicillin for 1 week
<input type="radio"/>	Isoniazid, rifampicin, pyrazinamide and ethambutol for 8 weeks
<input type="radio"/>	Doxycycline and rifampicin for 6 weeks

Dashboard

Overall score: **0%**

1 -

□ Question 114 of 155



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	Proguanil with atovaquone for 3 days
	Clarithromycin and amoxicillin for 1 week
	Isoniazid, rifampicin, pyrazinamide and ethambutol for 8 weeks
	Doxycycline and rifampicin for 6 weeks

Dashboard

Overall score: **0%**

1 -

□ Question 115 of 155

□ □

A 40-year-old woman is referred to the infectious diseases team after attending her GP practice requesting advice regarding antibiotic prophylaxis for Lyme disease. The patient explains that she is planning on a 2 week long walking holiday in the Lake District National Park in Cumbria, United Kingdom and that she is concerned about the risk associated with receiving tick bites during this period. Lyme disease is a particular concern for the patient as her younger sister had suffered serious neurological complications from the condition secondary to a tick bite in the Scottish Highlands. Concern about contracting Lyme disease herself had prevented her from partaking in her hobby of cross country walking for the past 2 years but she had now decided to confront her fear by undertaking the planned trip. After undertaking research on the Internet, the patient was keen to receive prophylactic antibiotics against *Borrelia* species during her trip.

The patient's past medical history included a diagnosis of breast cancer seven years previously. Following this diagnosis, the patient had undergone a wide local excision of the tumour with postoperative chemotherapy. The patient had been given the all clear from her oncologists after five years and had been subsequently been discharged from follow-up. In addition, the patient had experienced long-standing and, at times, troubling symptoms of irritable bowel syndrome.

The patient took regular hyoscine butylbromide as treatment of her gastrointestinal symptoms. The patient stated that she was allergic to penicillin-based antibiotics. Close questioning on this topic revealed that her adverse reaction to a previous course of penicillin V had been a protracted episode of diarrhoea.

The patient lives with her husband and three teenage children. She was employed full-time as a music teacher. The patient did not smoke cigarettes and consumed approximately 10 units of alcohol per week.

What is appropriate management following the patient's request for antibiotic prophylaxis against Lyme disease during her walking holiday?

	Prescribe amoxicillin for the duration of the patient's holiday
	Prescribe amoxicillin for immediate use if she receives a tick bite
	Prescribe doxycycline for the duration of the patient's holiday continued for an additional 10 days after her return home

	Advice on the prevention and management of tick bites only
	Prescribe doxycycline for immediate use if she receives a tick bite

Dashboard

Overall score: 0%

1 -

Question 115 of 155

□ □

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Dashboard

Overall score: **0%**
1 -

Question 116 of 155



A 60 year old male who is a malnourished alcoholic presents with a chronic cough for the past 6 weeks associated with a low grade fever. The cough is productive of purulent sputum.

Six months previously he had been diagnosed with early stage non-Hodgkin's lymphoma, which had responded well to chemotherapy (doxorubicin, bleomycin, vinblastine, and prednisolone).

On examination his temperature is 37.8°C, blood pressure 140/80 mmHg, and his pulse is 96/minute and regular. Auscultation of the chest reveals absence of breath sounds over the left middle lung field. Chest x-ray confirms left upper lobar consolidation.

The following investigations were ordered:

Hb	12 g/dl
Platelets	$180 \times 10^9/l$
WBC	$7 \times 10^9/l$
MCV	85 fl
Na+	140 mmol/l
K+	5 mmol/l
Creatinine	90 μ mol/l
Urea	5 mmol/l
CRP	50 mg/l

Sputum stains partially acid fast bacilli with branching rods

What is the most suitable initial management of this patient?

	Metronidazole + ampicillin
--	----------------------------

	Clarithromycin
	Ceftriaxone + clarithromycin
	Trimethoprim/sulfamethoxazole + amikacin + ceftriaxone
	Isoniazid + rifampin + pyrazinamide + ethambutol

Dashboard

Overall score: **0%**

1 -

Question 116 of 155



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	Isoniazid + rifampin + pyrazinamide + ethambutol

Dashboard

Overall score: **0%**
1 -

Question 117 of 155

□ □

A 25-year-old HIV-positive male goes to his GP with complaints of headache and left-sided weakness of recent onset. His temperature is 38°C, blood pressure is 115/70 mmHg, respirations are 14/min and pulse is 73/min.

Neurological examination reveals decreased power, hyperreflexia in the left upper and lower limb with associated upgoing plantars. CT head shows multiple ring-enhancing lesions.

What is the most appropriate next step in management?

	Trimethoprim-sulfamethoxazole
	Sulfadiazine and pyrimethamine
	Brain irradiation
	Brain biopsy
	Start albendazole

Dashboard

Overall score: 0%

1 -

□ Question 117 of 155

□ □

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1 -

Question 117 of 155



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Dashboard

Overall score: 0%

1 -



Question 117 of 155



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Dashboard

Overall score: 0%
1 -

10



□ Question 117 of 155

□ □

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Dashboard

Overall score: 0%

1 -



□ Question 117 of 155

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	Brain irradiation
	Brain biopsy
	Start albendazole

Dashboard

Overall score: **0%**

1 -

17



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Question 118 of 155

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A 41-year-old man with poorly controlled type 1 diabetes mellitus presents with a nodular lesion on the right-side of his face around the angle of the jaw. One month ago he had a tooth extraction at the dentist. The nodule is around 2 cm in diameter, raised and purple-red in colour. On examination a sinus tract is seen in the middle of the nodule which is draining a blood-stained fluid.

Microscopy of the discharge shows microscopic yellow granules.

What is the most likely causative organism?

	<i>Actinomyces israelii</i>
	<i>Tunga penetrans</i>
	<i>Klebsiella</i>
	<i>Pseudomonas aeruginosa</i>
	<i>Escherichia coli</i>

Dashboard

Overall score: 0%

1 -

Question 118 of 155

□ □

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Dashboard

Overall score: **0%**

1 -

□ Question 119 of 155

□ □

A 27-year-old nurse attends the emergency department and reports she has just suffered a significant needle-stick injury while caring for her patient on the intensive care unit. While providing her patient personal care with her colleague, she was injured in the hand by a wide bore stylet needle previously used to introduce an IV cannula to her patient that had not been placed in an appropriate sharps bin. The needle had been visibly blood stained. The nurse had been wearing gloves and had followed correct first aid procedure for needle-stick injuries.

The nurse was very concerned as the patient who had been the needle-stick donor was receiving treatment for the acute neurological phase of rabies. Review of the patients clinical notes (with the consent of the patients next of kin) indicated that he had contracted rabies following a dog bite two months previously in Pakistan. The diagnosis of rabies encephalitis had been made following clinical review by infectious disease experts and the detection of neutralising serum antibodies.

The nurse was previously fit and healthy with no significant past medical history. She did not use any regular medications and had no allergies. She was uncertain if she had had any previous vaccination against rabies, although did recall having a course of injections 10 years previously before she visited family in rural India.

What is the correct management of the needle-stick injury to prevent transmission of rabies?

	Rabies immunoglobulin and full course rabies vaccination
	Booster course rabies vaccination
	Rabies immunoglobulin
	Full course rabies vaccination
	No action required

Dashboard

Overall score: 0%

□ Question 119 of 155

□ □

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What is the correct management of the needle-stick injury to prevent transmission of rabies?

	Rabies immunoglobulin and full course rabies vaccination
	Booster course rabies vaccination
	Rabies immunoglobulin
	Full course rabies vaccination
	No action required

Dashboard

Overall score: **0%**

Question 120 of 155

□ □

A 26-year-old woman presents to the emergency department with right upper quadrant pain which is worse when she takes a deep breath in. Her symptoms started three days earlier and have been progressively getting worse. She has no past medical history and takes no medications apart from the oral contraceptive pill and paracetamol to help control the pain. She has also noticed an increase in vaginal discharge over the last two weeks and has noticed an unpleasant smell with it. She works in an investment bank. On examination, she has right upper quadrant tenderness, but the abdomen is soft and no organomegaly is noticed. Abdominal ultrasound demonstrates the presence of gallstones in the gallbladder but is otherwise normal. What treatment is most likely to resolve the cause of her underlying problem?

	Cholecystectomy
	Trimethoprim
	Antiviral treatment
	Antiretroviral treatment
	Ceftriaxone

Dashboard

Overall score: 0%

1 -

□ Question 120 of 155

□ □

A 26-year-old woman presents to the emergency department with right upper quadrant pain which is worse when she takes a deep breath in. Her symptoms started three days earlier and have been progressively getting worse. She has no past medical history and takes no medications apart from the oral contraceptive pill and paracetamol to help control the pain. She has also noticed an increase in vaginal discharge over the last two weeks and has noticed an unpleasant smell with it. She works in an investment bank. On examination, she has right upper quadrant tenderness, but the abdomen is soft and no organomegaly is noticed. Abdominal ultrasound demonstrates the presence of gallstones in the gallbladder but is otherwise normal. What treatment is most likely to resolve the cause of her underlying problem?

	Cholecystectomy
	Trimethoprim
	Antiviral treatment
	Antiretroviral treatment
	Ceftriaxone

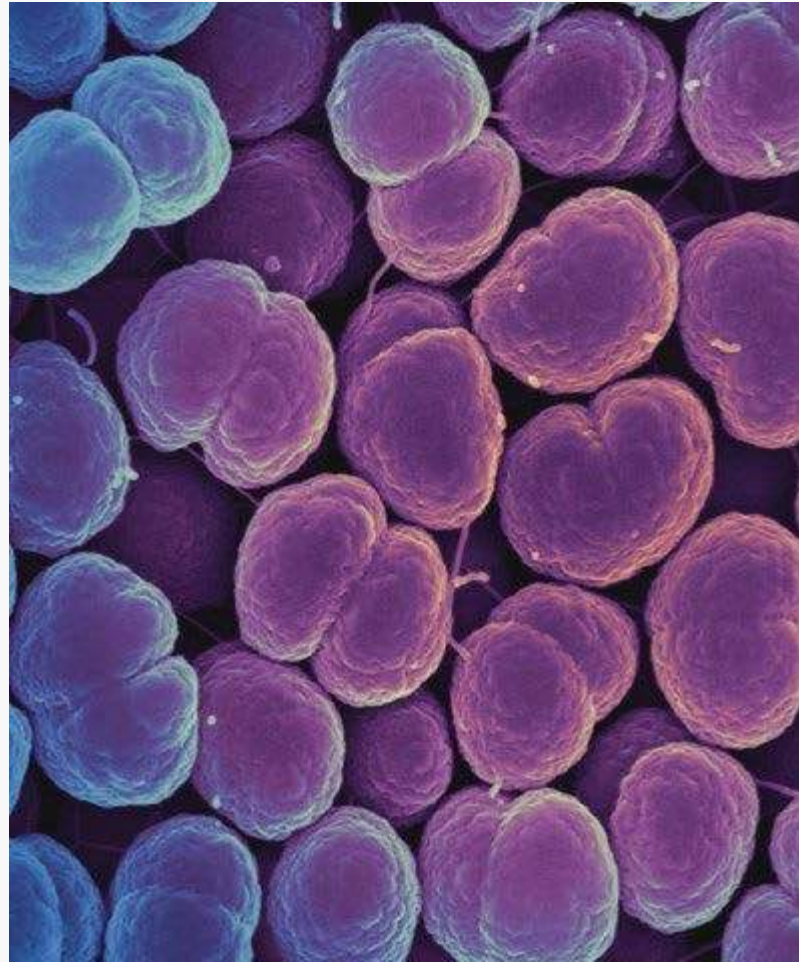
Dashboard

Overall score: **0%****1** -

Question 120 of 155

A 26-year-old woman presents to the emergency department with a fever and right upper quadrant pain. She takes a deep breath in. Her symptoms started three days ago. She has no past medical history and takes no medications apart from oral contraceptives. She has also noticed an increase in vaginal discharge with a foul smell with it. She works in an investment bank. On examination, her abdomen is soft and no organomegaly is noticed. Abdominal ultrasound shows a normal gallbladder but is otherwise normal. What treatment is most appropriate?

<input type="radio"/>	Cholecystectomy
<input type="radio"/>	Trimethoprim
<input type="radio"/>	Antiviral treatment
<input type="radio"/>	Antiretroviral treatment
<input checked="" type="radio"/>	Ceftriaxone



Dashboard

Overall score: **0%**

1 -

Question 121 of 155

A 35 year old man presents to the genitourinary medicine clinic with a 1 week history of ulcer on his penis. It is painless and he feels it might be increasing in size, though there are no other ulcers. He has never had any ulcers before.

He is HIV positive and remains sexually active with one regular male partner. They do not usually use condoms as he strictly adheres to his antiretroviral medication schedule and has an undetectable viral load. However, he has not had intercourse since developing the ulcer as it is too painful.

He had gonorrhoea aged 18 which was treated with antibiotics at the time and he has no history of any other sexually transmitted infections.

He has no other past medical history and no drug allergies. He takes no medications other than his antiretrovirals.

On examination he has a single shallow ulcer 1 x 2 cm on the dorsal surface of the penis with a small rim of surrounding erythema. He has no other rashes or lymphadenopathy. Systemic examination is otherwise unremarkable with no focal neurology.

Swabs from the ulcer are negative for herpes simplex virus 1 and 2.

Penile swabs are negative for chlamydia and gonorrhoea.

Syphilis serology result:

Enzyme immunoassay (EIA) +

Treponema Pallidum particle agglutination assay (TPPA) +

Rapid plasma reagin (RPR) -

What is the best immediate management option?

<input type="checkbox"/>	Intramuscular penicillin G and check repeat syphilis serology
<input type="checkbox"/>	Intramuscular penicillin G and check syphilis PCR
<input type="checkbox"/>	Check syphilis PCR
<input type="checkbox"/>	Oral doxycycline and check repeat syphilis serology

Dashboard

Overall score: **0%**

1 -

Question 121 of 155

A 35 year old man presents to the genitourinary medicine clinic with a 1 week history of ulcer on his penis. It is painless and he feels it might be increasing in size, though there are no other ulcers. He has never had any ulcers before.

He is HIV positive and remains sexually active with one regular male partner. They do not usually use condoms as he strictly adheres to his antiretroviral medication schedule and has an undetectable viral load. However, he has not had intercourse since developing the ulcer as it is too painful.

He had gonorrhoea aged 18 which was treated with antibiotics at the time and he has no history of any other sexually transmitted infections.

He has no other past medical history and no drug allergies. He takes no medications other than his antiretrovirals.

On examination he has a single shallow ulcer 1 x 2 cm on the dorsal surface of the penis with a small rim of surrounding erythema. He has no other rashes or lymphadenopathy. Systemic examination is otherwise unremarkable with no focal neurology.

Swabs from the ulcer are negative for herpes simplex virus 1 and 2.

Penile swabs are negative for chlamydia and gonorrhoea.

Syphilis serology result:

Enzyme immunoassay (EIA) +

Treponema Pallidum particle agglutination assay (TPPA) +

Rapid plasma reagin (RPR) -

What is the best immediate management option?

	Intramuscular penicillin G and check repeat syphilis serology
	Intramuscular penicillin G and check syphilis PCR
	Check syphilis PCR
	Oral doxycycline and check repeat syphilis serology

Dashboard

Overall score: **0%**

1 -

□ Question 121 of 155



A 35 year old man presents with a skin rash on his palms and he feels it might be increasing.

He is HIV positive and remains strictly adherent to his antiretroviral therapy since developing the rash.

He had gonorrhoea aged 18 and no other sexually transmitted infections.

He has no other past medical history.

On examination he has a symmetrical, non-pruritic, erythematous rash on the palms. He has no other rashes or lymphadenopathy. Systemic examination is otherwise unremarkable with no focal neurological signs.

Swabs from the ulcer are negative for herpes simplex virus 1 and 2.

Penile swabs are negative for chlamydia and gonorrhoea.

Syphilis serology result:

Enzyme immunoassay (EIA) +

Treponema Pallidum particle agglutination assay (TPPA) +

Rapid plasma reagin (RPR) -

What is the best immediate management option?

	Intramuscular penicillin G and check repeat syphilis serology
	Intramuscular penicillin G and check syphilis PCR
	Check syphilis PCR
	Oral doxycycline and check repeat syphilis serology

Dashboard

Overall score: **0%**

1 -

Question 121 of 155

A 35 year old man presents to the genitourinary medicine clinic and he feels it might be increasing in size, though the ulcer is not painful.

He is HIV positive and remains sexually active with a steady partner. He strictly adheres to his antiretroviral medication schedule and has no unprotected intercourse since developing the ulcer as it is too painful.

He had gonorrhoea aged 18 which was treated with ceftriaxone and cefixime. He has no other sexually transmitted infections.

He has no other past medical history and no drug allergies.

On examination he has a single shallow ulcer 1 x 2 cm with a white base and erythema. He has no other rashes or lymphadenopathy. His neurological examination is normal.

Swabs from the ulcer are negative for herpes simplex virus 1 and 2. Penile swabs are negative for chlamydia and gonorrhoea.

Syphilis serology result:

Enzyme immunoassay (EIA) +

Treponema Pallidum particle agglutination assay (TPPA) +

Rapid plasma reagin (RPR) -

What is the best immediate management option?



	Intramuscular penicillin G and check repeat syphilis serology
	Intramuscular penicillin G and check syphilis PCR
	Check syphilis PCR
	Oral doxycycline and check repeat syphilis serology

Dashboard

Overall score: **0%**

1 -

Question 122 of 155

□ □

A 54-year-old gentleman attends the Emergency Department, following a dog bite on his forearm 6 hours earlier. This occurred in the United Kingdom. The wound is clean with no active bleeding. There is no damage to underlying structures. He has no past medical history of note and does not take any regular medications. He has no known drugs allergies. He is unsure of his previous immunisation status. What is the most appropriate advice?

	Nothing additional required
	Rabies immunoglobulin
	Rabies vaccination
	Tetanus immunoglobulin
	Tetanus booster vaccination

Dashboard

Overall score: 0%

1 -

Question 122 of 155

□ □

A 54-year-old gentleman attends the Emergency Department, following a dog bite on his forearm 6 hours earlier. This occurred in the United Kingdom. The wound is clean with no active bleeding. There is no damage to underlying structures. He has no past medical history of note and does not take any regular medications. He has no known drugs allergies. He is unsure of his previous immunisation status. What is the most appropriate advice?

	Nothing additional required
	Rabies immunoglobulin
	Rabies vaccination
	Tetanus immunoglobulin
	Tetanus booster vaccination

Dashboard

Overall score: **0%**

1 -

Question 123 of 155

□ □

A 15-year-old male is investigated following a one week history of fever, non-productive cough, sore throat and headaches. Today he noticed a skin rash. His temperature is 38.5°C, pulse is 90/min, blood pressure is 115/78 mmHg and respirations are 16/min.

On examination his throat is hyperaemic, but there is no cervical lymphadenopathy. Chest auscultation and percussion reveal no abnormalities. You note dusky red, target shaped skin lesions over all four extremities. Chest x-ray reveals interstitial infiltrates in the left lower lobe. Sputum Gram stain reveals polymorphonuclear cells but no organisms.

Which of the following organisms is most likely responsible for this presentation?

	<i>Streptococcus pneumoniae</i>
	<i>Haemophilus influenzae</i>
	<i>Legionella pneumophila</i>
	<i>Mycoplasma pneumoniae</i>
	Epstein Barr virus

Dashboard

Overall score: 0%

1 -

□ Question 123 of 155

□ □

A 15-year-old male is investigated following a one week history of fever, non-productive cough, sore throat and headaches. Today he noticed a skin rash. His temperature is 38.5°C, pulse is 90/min, blood pressure is 115/78 mmHg and respirations are 16/min.

On examination his throat is hyperaemic, but there is no cervical lymphadenopathy. Chest auscultation and percussion reveal no abnormalities. You note dusky red, target shaped skin lesions over all four extremities. Chest x-ray reveals interstitial infiltrates in the left lower lobe. Sputum Gram stain reveals polymorphonuclear cells but no organisms.

Which of the following organisms is most likely responsible for this presentation?

	<i>Streptococcus pneumoniae</i>
	<i>Haemophilus influenzae</i>
	<i>Legionella pneumophila</i>
	<i>Mycoplasma pneumoniae</i>
	Epstein Barr virus

Dashboard

Overall score: 0%

1 -

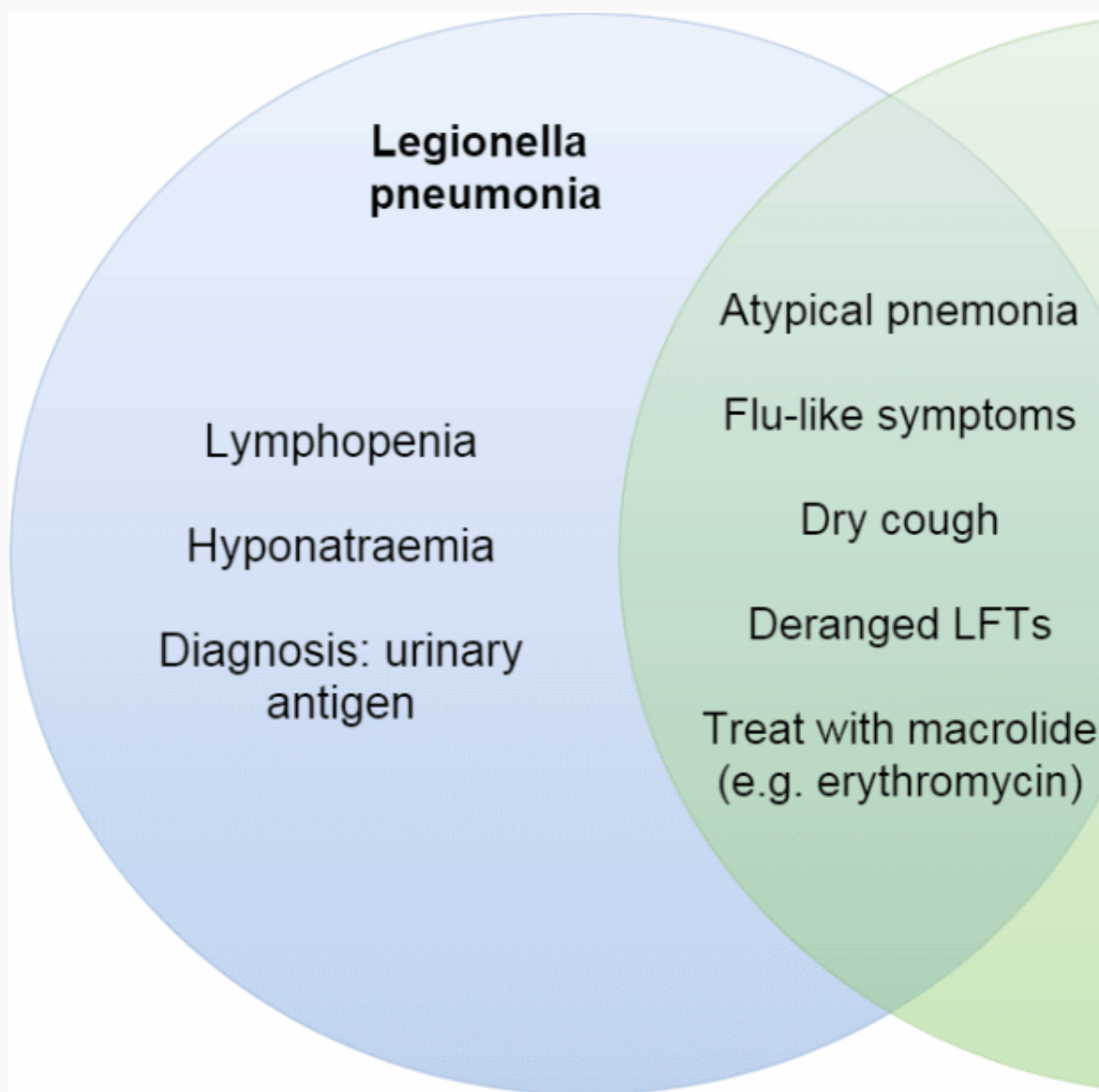
Question 123 of 155

A 15-year-old male is investigated for recurrent headaches. Today he notices a fever and respirations are 16/min.

On examination his throat is normal. Chest examination reveals no abnormalities. Your chest X-ray shows bilateral interstitial infiltrates in the lower zones.

Which of the following organisms is the most likely cause of his pneumonia?

<input type="radio"/>	<i>Streptococcus pneumoniae</i>
<input type="radio"/>	<i>Haemophilus influenzae</i>
<input type="radio"/>	<i>Legionella pneumophila</i>
<input checked="" type="radio"/>	<i>Mycoplasma pneumoniae</i>
<input type="radio"/>	Epstein Barr virus



Dashboard

Overall score: 0%

1 -

Question 124 of 155

□ □

A 27 year-old Lithuanian male presents to the Emergency Department with a short history productive cough, fever and breathlessness. The chest X-Ray shows left upper zone consolidation. His white cell count and CRP are elevated and IV antibiotics are commenced for a community acquired pneumonia. He makes some improvement after 48 hours but remains on 4L of oxygen to maintain adequate saturations. An interferon gamma release assay for mycobacterium is positive.

What would be the correct course of action?

	Send three morning sputum samples for acid fast bacilli
	Arrange a bronchoscopy and washings for acid fast bacilli
	No action, continue antibiotics, repeat CXR in 6 weeks time
	Treat for latent pulmonary tuberculosis with two agents
	Treat for active pulmonary tuberculosis with quadruple therapy

Dashboard

Overall score: 0%

1 -

Question 124 of 155

□ □

A 27 year-old Lithuanian male presents to the Emergency Department with a short history productive cough, fever and breathlessness. The chest X-Ray shows left upper zone consolidation. His white cell count and CRP are elevated and IV antibiotics are commenced for a community acquired pneumonia. He makes some improvement after 48 hours but remains on 4L of oxygen to maintain adequate saturations. An interferon gamma release assay for mycobacterium is positive.

What would be the correct course of action?

	Send three morning sputum samples for acid fast bacilli
	Arrange a bronchoscopy and washings for acid fast bacilli
	No action, continue antibiotics, repeat CXR in 6 weeks time
	Treat for latent pulmonary tuberculosis with two agents
	Treat for active pulmonary tuberculosis with quadruple therapy

Dashboard

Overall score: **0%**

1 -

Question 124 of 155

A 27 year-old Lithuanian male presents to the Emergency Department with acute onset breathlessness. The chest X-Ray shows left upper zone consolidation. Intravenous antibiotics are commenced for a community acquired pneumonia. The patient remains on 4L of oxygen to maintain adequate saturation. Sputum culture remains positive.

What would be the correct course of action?

<input checked="" type="checkbox"/>	Send three morning sputum samples for acid fast bacilli
<input type="checkbox"/>	Arrange a bronchoscopy and washings for culture
<input type="checkbox"/>	No action, continue antibiotics, repeat CXR
<input type="checkbox"/>	Treat for latent pulmonary tuberculosis with isoniazid
<input type="checkbox"/>	Treat for active pulmonary tuberculosis with quadruple therapy



Dashboard

Overall score: 0%

1 -

Question 125 of 155



A 35 year old Indian women, is admitted with a fever, general muscle aches and a global headache. She had been on holiday in India 9 months ago and had been treated for 5 days with chloroquine for malaria.

Which malaria species is responsible for her current presentation?

<input type="radio"/>	<i>Plasmodium vivax</i>
<input type="radio"/>	<i>Plasmodium falciparum</i>
<input type="radio"/>	<i>Plasmodium recurrentis</i>
<input type="radio"/>	<i>Plasmodium malariae</i>
<input type="radio"/>	<i>Plasmodium knowlesi</i>

Dashboard

Overall score: **0%**

1 -

Question 125 of 155

□ □

A 35 year old Indian women, is admitted with a fever, general muscle aches and a global headache. She had been on holiday in India 9 months ago and had been treated for 5 days with chloroquine for malaria.

Which malaria species is responsible for her current presentation?

	<i>Plasmodium vivax</i>
	<i>Plasmodium falciparum</i>
	<i>Plasmodium recurrentis</i>
	<i>Plasmodium malariae</i>
	<i>Plasmodium knowlesi</i>

Dashboard

Overall score: **0%**

1 -

□ Question 126 of 155

□ □

A 23 year-old student presents with a febrile illness, seven days after return from holiday in Thailand. He delayed seeking medical attention because he thought it was 'just a virus', and he had experienced similar self-limiting symptoms when travelling to Vietnam several years earlier. He did not take malaria prophylaxis due to a previous adverse reaction to mefloquine. The illness began two days after his return, when he recorded his temperature at 38.4°C. He also complains of severe generalised joint pains and headache which he describes as 'behind the eyes'. Today he has developed nosebleeds and when he brushed his teeth this morning he noticed that his gums bled.

On examination his temperature is 38.2°C and there is a widespread macular rash with islands of sparing. There are some petechial haemorrhages on the limbs. Cardio-respiratory examination is unremarkable except for tachycardia of 114. Blood pressure is 123/79 mmHg. On palpation of the abdomen you discover tender hepatomegaly. Neurological examination is unremarkable.

On application of a tourniquet to take a blood sample you notice that the area under the tourniquet has become bruised.

Results of blood tests are as follows:

Hb	14.1 g/dl
MCV	94.2 fl
Haematocrit	0.57
Platelets	23 x10 ⁹ /l
WCC	6.1 x10 ⁹ /l

Na ⁺	134 mmol/l
K ⁺	4.6 mmol/l
Urea	3.8 mmol/l
Creatinine	80 µmol/l

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ALT	64 IU/l
ALP	78 IU/l
Bilirubin	13 mol/l
Albumin	28 g/l

Rapid Malaria test	Negative
Thick and thin blood films	Pending

What is the most likely diagnosis?

<input type="radio"/>	Non-falciparum malaria
<input type="radio"/>	Dengue haemorrhagic fever
<input type="radio"/>	Lassa fever
<input type="radio"/>	Meningococcal septicaemia
<input type="radio"/>	HIV seroconversion

Dashboard
Overall score: 0%
1 -

□ Question 126 of 155

□ □

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Rapid Malaria test	Negative
Thick and thin blood films	Pending

What is the most likely diagnosis?

	Non-falciparum malaria
	Dengue haemorrhagic fever
	Lassa fever
	Meningococcal septicaemia
	HIV seroconversion

Dashboard
Overall score: 0% 1 -

Question 127 of 155

□ □

A 46 year old Indian gentleman who moved to the UK four years previously presents to the Emergency Department complaining of a numb left foot. He has a background history of type 2 diabetes mellitus, hypertension and gastro-oesophageal reflux disease. His latest haemoglobin A1c (HbA1c) is 6.4%. On examination he has reduced sensation over the left heel and plantar aspect of the foot and six hypoesthetic, hypopigmented patches over both legs. What is the most appropriate management?

	Referral to diabetes specialist clinic for management of peripheral neuropathy
	Dapsone, clofazimine
	Rifampicin, clofazimine, isoniazid
	Rifampicin, dapsone, clofazimine
	Dapsone, terbinafine, rifampicin

Dashboard

Overall score: 0%

1 -

Question 127 of 155

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	Dapsone, terbinafine, rifampicin

Dashboard

Overall score: **0%**

1 -

□ Question 128 of 155



A 75-year-old retired plumber presents to the emergency department with recurrent urinary tract infections. He has been treated by his GP four times in the last six months with this complaint, with trimethoprim twice and a further two courses of amoxicillin. He is confused on this presentation and is will not comply with a full neurological examination. His past medical history includes a stroke and a known gastric ulcer. An ultrasound of his renal tract did not reveal any structural defects of hydronephrosis. His son reveals that he is under investigation for a possible haematological malignancy, and had a bone marrow biopsy two days ago. On examination, his heart rate is 115/min, respiratory rate 18/min, blood pressure 134/89mmHg. His respiratory, cardiovascular and abdominal examinations are all unremarkable, other than a soft ejection systolic murmur. He has a tender prostate. His blood reveal:

Hb	12.7 g/dl
Platelets	80 * 10 ⁹ /l
WBC	17.1 * 10 ⁹ /l

Na ⁺	141 mmol/l
K ⁺	3.5 mmol/l
Creatinine	77 µmol/l
CRP	99 mg/l
PSA	6 ng/dl

Given the likely diagnosis, what is the recommended treatment course?

	No treatment required
	One week course of co-amoxiclav
	Tamsulosin

	Finasteride
	Four week course of ciprofloxacin

Dashboard

Overall score: **0%**

1 -

□ Question 128 of 155



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Given the likely diagnosis, what is the recommended treatment course?

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	One week course of co-amoxiclav
	Tamsulosin

	Finasteride
	Four week course of ciprofloxacin

Dashboard

Overall score: **0%**
1 -

Question 129 of 155

A 31 year-old male originally from Russia who is known to be HIV positive presents with a rash. On examination there are purple-red cutaneous macules and papules on the back, neck and oral mucosal membrane.

Blood results reveal:

Hb	141 g/l
Platelets	327 * 10 ⁹ /l
WBC	4.2 * 10 ⁹ /l
Na ⁺	141 mmol/l
K ⁺	3.7 mmol/l
Urea	4.6 mmol/l
Creatinine	59 µmol/l
Bilirubin	27 µmol/l
ALP	97 u/l
ALT	44 u/l
Albumin	30 g/l
HIV viral load	14,000 copies / ml
CD4 cell count	124 cell/mm ³

A skin biopsy is performed and the report is below:

Spindle cells present. Mitotic activity is moderate. Abnormally dense and irregular blood vessels. Intracellular hyaline bodies present.

Which virus is likely to be responsible for these lesions?

	CMV
	EBV
	HIV-2
	HHV-8
	HPV-8

Dashboard

Overall score: **0%**

1 -

Question 129 of 155

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	CMV
	EBV
	HIV-2
	HHV-8
	HPV-8

Dashboard

Overall score: **0%**
1 -

□ Question 130 of 155



A 66 year old lady, originally from Pakistan, has lived in the UK for 10 years. She has type 2 diabetes mellitus which is controlled with metformin only.

For the last few years she has had multiple lumps over her whole body but this hasn't bothered her as it has been there for several years and not got too much worse. She has been seeing the diabetic foot care team due to several traumatic shoe healing ulcers on her feet.

Over the past few weeks she has been feeling increasingly unwell. She has had a fever, pain in her knees and elbows, sore painful eyes. She also complains of painful swelling in her ring and little fingers on her right hand.

On examination her temperature is 37.8°C. Her pulse is 91 beats/minute and her RR is 18 breaths/minute. Her oxygen saturations are 97% on room air.

She has a multiple nodular lesions over her whole body in a symmetrical distribution. Sizes of these nodules range from 2cm - 4cm. These lesions are not painful, in fact with the larger ones she is unable to feel you touching them. On her shins there are several hot painful nodules which are uncomfortable to touch. She has a saddle deformity of her nose. There are several scars on her hands, and an ulcer on the lateral dorsum of her foot. Cardiorespiratory and abdominal examination is essentially normal. Both knees and elbow are slightly erythematous and swollen. She has weakness abducting her little and index finger on her left hand and has no sensation in her left little finger. There is a non-painful 1x4 cm lump two centimetres distal to her left medial epicondyle.

Urinalysis reveals ++ of protein and + of blood.

Blood sugar: 8.8 mmol/L

On the clinical information alone what investigation is most likely to secure the diagnosis?

	Serum cANCA antibody
	Serum dsDNA antibody
	Renal biopsy

	Skin biopsy
	Serum ANA antibody

Dashboard

Overall score: **0%**

1 -

□ Question 130 of 155

□ □

A 66 year old lady, originally from Pakistan, has lived in the UK for 10 years. She has type 2 diabetes mellitus which is controlled with metformin only.

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	Serum cANCA antibody
	Serum dsDNA antibody
	Renal biopsy

	Skin biopsy
	Serum ANA antibody

Dashboard

Overall score: **0%**
1 -

□ Question 131 of 155

□ □

A 38-year-old man is admitted to the Emergency Department with shortness-of-breath and a non-productive cough. He has recently emigrated from Russia and has just started anti-retroviral therapy for HIV.

Examination of his chest is unremarkable. His temperature is 37.7°C and oxygen saturations are 95% on room air.

A chest x-ray is performed:



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What is the most likely diagnosis?

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	Cytomegalovirus
	Mediastinal lymphoma
	Tuberculosis
	Mycoplasma pneumonia
	Pneumocystis jiroveci pneumonia

Dashboard

Overall score: 0%

1 -

□ Question 131 of 155

□ □

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Dashboard

Overall score: **0%**
1 -

Question 131 of 155



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© Image used on license from Radiopaedia



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	Mycoplasma pneumonia
	Pneumocystis jiroveci pneumonia

Dashboard

Overall score: 0%

Se:2
Im:41

[A]

Study ID: 0007
2:56 PM
MRN

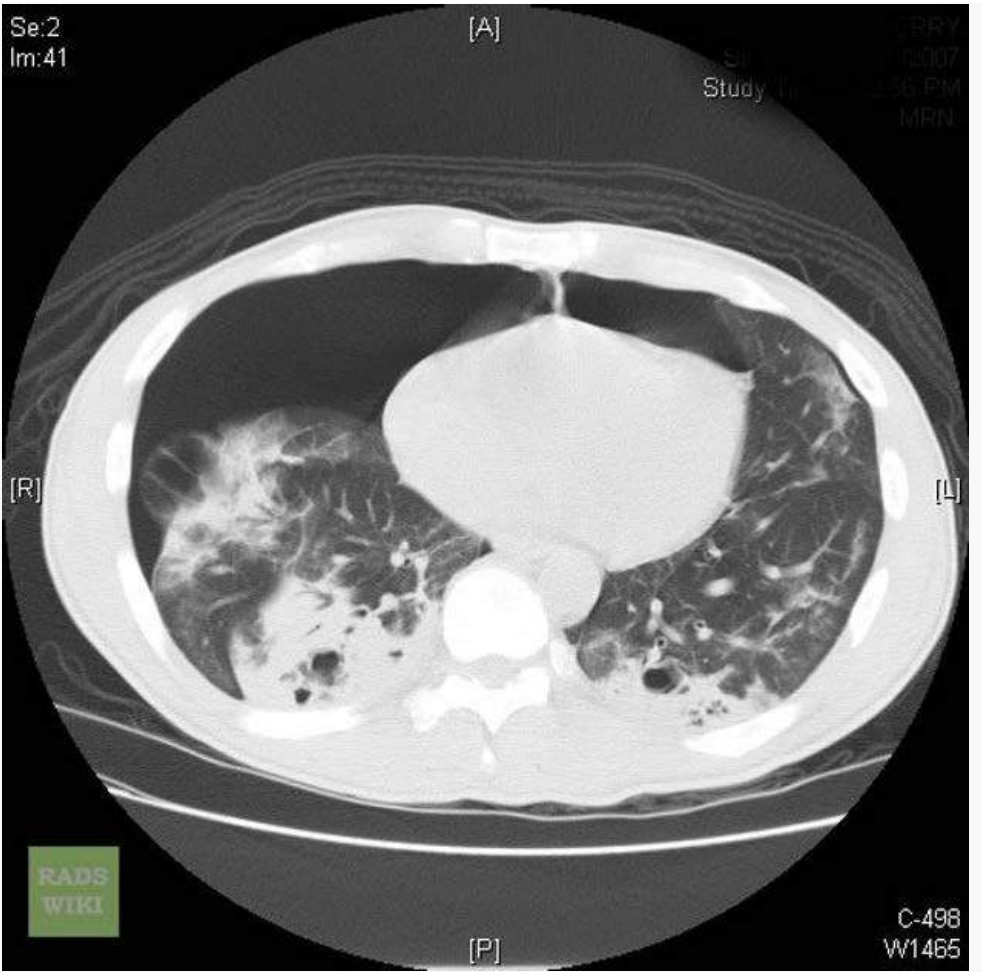
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[P]

C-498
W1465



Question 132 of 155

□ □

A 14 week pregnant woman attends her GP describing significant contact 2 days ago with a friend's daughter, who has been diagnosed with chickenpox. When questioned, she informs the GP that she has never had chickenpox before. Her GP arranges serological testing for varicella zoster virus (VZV), which confirms that she is non-immune. What would be the most appropriate management?

	Aciclovir & varicella-zoster immunoglobulin (VZIG) as soon as possible
	VZIG as soon as possible
	No treatment needed, as more than 24 hours since contact occurred
	VZIG if she develops chickenpox rash
	Varicella vaccine

Dashboard

Overall score: **0%**

1 -

Question 132 of 155

□ □

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	No treatment needed, as more than 24 hours since contact occurred
	VZIG if she develops chickenpox rash
	Varicella vaccine

Dashboard

Overall score: **0%**

1 -

□ Question 133 of 155



A 38 year-old intravenous drug user presented to accident and emergency with a 10-day history of severe watery diarrhoea and abdominal cramps. Her past medical history included treatment for a groin abscess 3 years previously. She could not remember ingesting any possible causative food and had not travelled abroad. She smoked 15 cigarettes per day and drank 30-40 units of alcohol per week.

On examination, her temperature was 36.8°C, heart rate 100 beats per minute, blood pressure 92/58 mmHg, respiratory rate 18 breaths per minute and oxygen saturations 100% on room air. Her tongue appeared dry with white patches evident on the hard palate and throat. The JVP was not visible. Her chest was clear on auscultation and heart sounds were normal. The abdomen was soft on palpation with some mild central abdominal tenderness.

Investigations:

Haemoglobin	170 g/L
White cell count	$4.5 \times 10^9/l$
Neutrophil count	$3.0 \times 10^9/l$
Lymphocyte count	$0.1 \times 10^9/l$
Eosinophil count	$0.4 \times 10^9/l$
Platelets	$423 \times 10^9/l$

Sodium	132 mmol/l
Potassium	3.0 mmol/L
Urea	13.0 mmol/L
Creatinine	110 mol/L
Alkaline phosphatase	57 IU/L
Alanine aminotransferase	60 IU/L
Gamma-glutyl transferase	67 IU/L

Bilirubin	19 mol/L
Albumin	29 g/L

Abdominal x-ray: No abnormality detected
Stool culture: No growth at 48 hours

What additional staining technique should be used for analysing the stool sample?

	Ziehl-Neelson
	Romanowsky
	Periodic acid-Schiff
	Sudan
	Silver

Dashboard

Overall score: 0%

1 -

□ Question 133 of 155



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	Romanowsky
	Periodic acid-Schiff
	Sudan
	Silver

Dashboard

Overall score: **0%**

1 -

□ Question 134 of 155

□ □

A 40-year-old male presented to the Emergency Department with a decreasing level of consciousness. He had just returned from the Hajj pilgrimage in Saudi Arabia. He was completely healthy during his travels, but he started to develop a fever 2 days after his return. The fever was associated with a severe frontal headache and photophobia. These symptoms persisted for the last two days and he started to become sleepier.

On examination: blood pressure 100/80 mmHg, pulse rate 120/min, temperature 39.2°C, respiratory rate 27/min. He had evidence of neck stiffness. Blood investigations showed:

Hb	123 g/l
Platelets	130* 10 ⁹ /l
WBC	13* 10 ⁹ /l

What is the most likely diagnosis?

	Meingiococcal meningits type A
	Meingiococcal meningits type B
	Meingiococcal meningits type C
	Malaria
	Hemorrhagic fever

Dashboard

Overall score: 0%

1 -

Question 134 of 155

□ □

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	Meingiococcal meningits type B
	Meingiococcal meningits type C
	Malaria
	Hemorrhagic fever

Dashboard

Overall score: **0%**

1 -

Question 135 of 155

□ □

A 44-year-old white male presents to his GP with a long history of joint pains in several joints, which has gradually affected his ability to work on his farm. He has seen another doctor before but no diagnosis was made. He has been taking ibuprofen with partial relief. He has now developed fever, diarrhoea and weight loss. He denies any genitourinary or eye symptoms. He does not use tobacco, alcohol or drugs.

On examination he has generalised lymphadenopathy and non-deforming arthritis. Small intestinal biopsy reveals macrophage infiltration into the lamina propria.

Which of the following is the most likely diagnosis?

	Reactive arthritis
	Sarcoidosis
	Inflammatory bowel disease
	Whipple's disease
	Coeliac disease

Dashboard

Overall score: 0%

1 -

Question 135 of 155

□ □

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Which of the following is the most likely diagnosis?

	Reactive arthritis
	Sarcoidosis
	Inflammatory bowel disease
	Whipple's disease
	Coeliac disease

Dashboard

Overall score: **0%**

1 -

Question 136 of 155

A 19-year-old man returned from a year long gap year project in West Africa. He finished in Gabon and noticed swelling in his right arm. Since returning to the United Kingdom he has had intermittent swelling of his right forearm for the last 6 weeks. This is not localised to a joint, moves around and is non tender - lasting a few days before disappearing again. What is the most likely diagnosis?

<input type="checkbox"/>	Fleeting inflammatory arthritis
<input type="checkbox"/>	Loa-Loa
<input type="checkbox"/>	Mastocytosis
<input type="checkbox"/>	Cutaneous leishmaniasis
<input type="checkbox"/>	Sweet syndrome

Dashboard

Overall score: **0%**

1 -

Question 136 of 155

□ □

A 19-year-old man returned from a year long gap year project in West Africa. He finished in Gabon and noticed swelling in his right arm. Since returning to the United Kingdom he has had intermittent swelling of his right forearm for the last 6 weeks. This is not localised to a joint, moves around and is non tender - lasting a few days before disappearing again. What is the most likely diagnosis?

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Dashboard

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1 -

Question 136 of 155

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	Loa-Loa
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Dashboard

Overall score: **0%**

1 -

Question 137 of 155

□ □

A 24-year-old male patient is referred to HIV clinic following positive testing on screening in a local GUM clinic. His CD4 count is 1020 cells/microlitre and viral load is 10,123 copies/ml. He is offered to start antiretroviral treatment or monitoring. He has a past medical history of depression and has emigrated from Nigeria three years ago. He is planning to return abroad in two years. What benefit has been established from starting early antiretroviral treatment as opposed to deferring treatment?

	Increased efficacy
	Reduced risk of AIDS and mortality
	Reduced drug resistance
	Reduced toxicity
	Reduced anxiety

Dashboard

Overall score: 0%

1 -

Question 137 of 155

□ □

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Dashboard

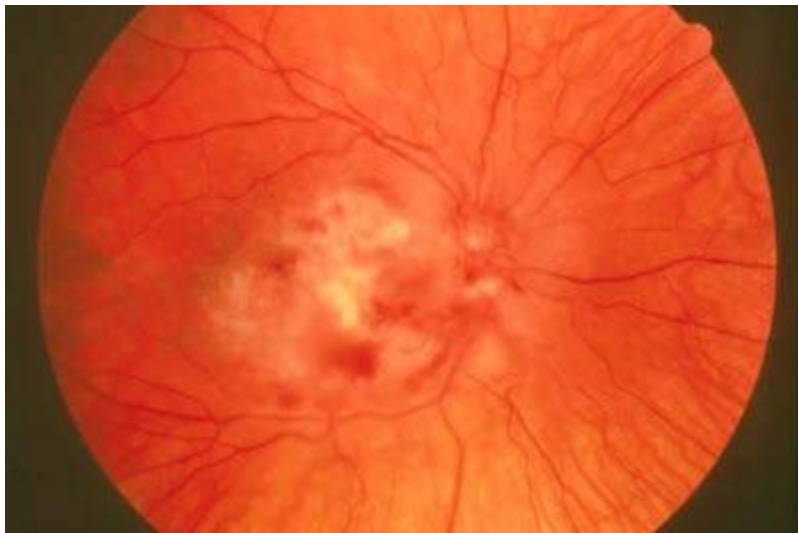
Overall score: **0%**

1 -

□ Question 138 of 155

□ □

A 42-year-old man who has recently emigrated to the UK is seen in the HIV clinic. He was diagnosed with HIV 5 years ago and has only sporadically taken anti-retroviral therapy during that period. He complains of blurred vision. Fundoscopy shows the following:



What is the most appropriate treatment?

	Intravenous ganciclovir
	Oral pyrimethamine and sulfadiazine, plus folinic acid
	Intravenous methylprednisolone
	Oral mebendazole
	Oral co-trimoxazole

Dashboard

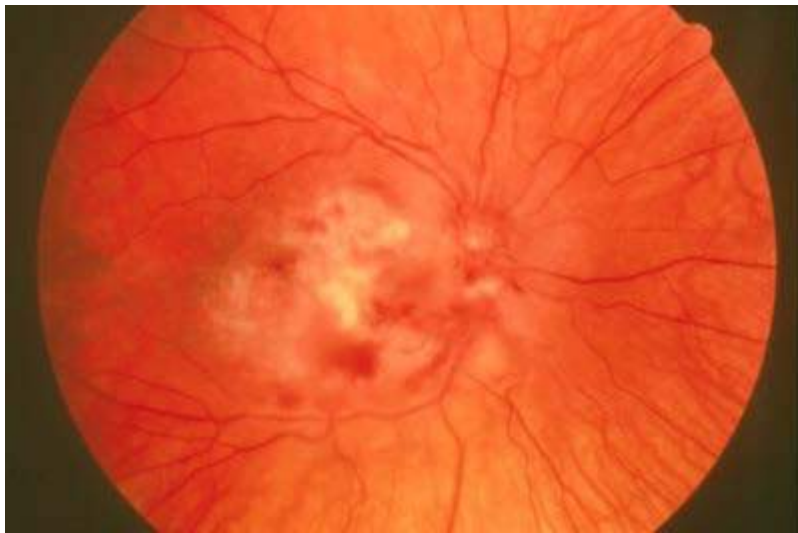
Overall score: **0%**

1 -

Question 138 of 155

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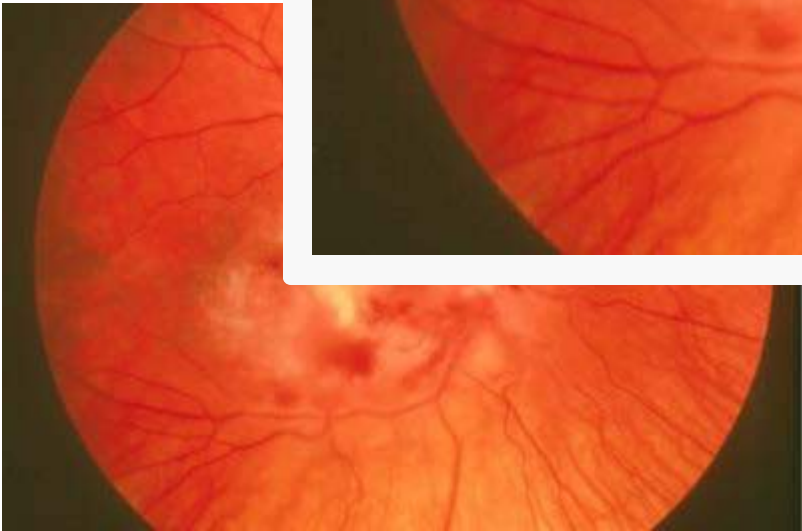
Dashboard

Overall score: **0%**

1 -

Question 138 of 155

A 42-year-old man who has recently emigrated to the UK 10 years ago and has only sporadically taken anti-retroviral therapy. Fundoscopy shows the following:



What is the most appropriate treatment?

	Intravenous ganciclovir
	Oral pyrimethamine and sulfadiazine, plus folinic acid
	Intravenous methylprednisolone
	Oral mebendazole
	Oral co-trimoxazole

Dashboard

Overall score: **0%**

1 -

Question 139 of 155



A 34-year-old male returns to your clinic for review of his blood tests. In particular, his hepatitis screen returns as follows:

HBsAg	negative
anti-HBc	positive
anti-HBs	positive

These results can be best interpreted as:

	Acutely infected
	Susceptible to hepatitis B
	Immune due to hepatitis B vaccination
	Chronically infected
	Immune due to natural infection

Dashboard

Overall score: 0%

1 -

Question 139 of 155

A 34-year-old male returns to your clinic for review of his blood tests. In particular, his hepatitis screen returns as follows:

HBsAg	negative
anti-HBc	positive
anti-HBs	positive

These results can be best interpreted as:

	Acutely infected
	Susceptible to hepatitis B
	Immune due to hepatitis B vaccination
	Chronically infected
	Immune due to natural infection

Dashboard

Overall score: 0%

1 -

□ Question 140 of 155

□ □

The Medical Emergency Team was called to the interventional radiology department to review a 48 year-old farmer who was attending for liver biopsy. The procedure itself was uneventful but a few minutes afterwards he became acutely unwell and short of breath. His past medical history was unremarkable apart from on-going investigation for deranged liver function tests. He was on no medication and had no known allergies. He had no travel history of note, was a non-smoker and drank 14 units of alcohol per week.

On examination, he was laid flat on the trolley and appeared flushed. His temperature was 36.7°C, heart rate was 110 beats per minute, blood pressure 82/40 mmHg, respiratory rate 28 breaths per minute and oxygen saturations 100% on non-rebreather mask. The chest was clear on auscultation and heart sounds were normal. His JVP was not visible. There was some mild right upper quadrant tenderness on palpation of the abdomen, but no guarding or rebound tenderness.

The investigations prior to the biopsy were as follows:

Haemoglobin	160 g/L (130-180)
White cell count	$8.0 \times 10^9/l$
Neutrophil count	$4.0 \times 10^9/l$
Lymphocyte count	$3.0 \times 10^9/l$
Eosinophil count	$0.8 \times 10^9/l$
Platelets	$350 \times 10^9/l$

Sodium	140 mmol/L
Potassium	4.1 mmol/L
Urea	6.5 mmol/L
Creatinine	75 mol/L
Alkaline phosphatase	101 IU/L
Alanine aminotransferase	82 IU/L

Gamma-glutyl transferase	59 IU/L
Bilirubin	18 mol/L
Albumin	36 g/L

Prothrombin time	12 s (10-14)
Activated partial thromboplastin time	38 s (30-45)

Ultrasound abdomen: Hypoechogenic lesion in the right lobe of the liver

What is the most appropriate initial treatment?

<input type="checkbox"/>	Intravenous dobutamine
<input type="checkbox"/>	Intramuscular adrenaline
<input type="checkbox"/>	Intravenous antibiotics
<input type="checkbox"/>	O-negative blood transfusion
<input type="checkbox"/>	Emergency laparotomy

Dashboard

Overall score: **0%**

1 -

□ Question 140 of 155



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□ Question 140 of 155

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Dashboard

Overall score: **0%**
1 -



Question 141 of 155

□ □

A 17-year-old man is referred to the infectious disease department with a sore throat, fever and lymphadenopathy. He has been generally unwell for the previous 3 days but presented as he noticed some yellowing of his eyes. His routine blood test show-

Bilirubin	55 $\mu\text{mol/l}$
ALP	54 u/l
ALT	402 u/l
AST	188 u/l
γGT	17 u/l
Albumin	43 g/l

He has no travel or sexual history and has never used intravenous drugs. What is the most likely causative organism?

	Viridans group Streptococci
	Hepatitis B virus
	<i>Echinococcus granulosus</i>
	Hepatitis C virus
	Epstein Barr virus (EBV)

Dashboard

Overall score: 0%

1 -

Question 141 of 155

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	Hepatitis C virus
	Epstein Barr virus (EBV)

Dashboard

Overall score: **0%****1** -

□ Question 142 of 155



An 80-year-old gentleman presented with a 4 month history of feeling generally unwell, being more breathless and tired than usual, feeling feverish and having a dry cough. He had already been treated by the General Practitioner with 2 courses of antibiotics in the community with only temporary improvement. His past medical history includes previous myocardial infarction, permanent pacemaker (PPM) with box-change 8 months ago, hypertension, diabetes, anaemia and chronic kidney disease (stage 2). He is a lifelong smoker.

On examination his heart sounds were normal with no murmurs, he had scattered crackles and his abdomen was soft and non-tender. There was mild leg oedema and a faint purpuric rash on his shins. His vital signs revealed heart rate = 80 beats per minute, blood pressure = 130/70 mmHg, T=37.8oC, SaO₂ = 96% on air and respiratory rate = 20 breaths per minute. His chest X-ray did not show any consolidation and his urine was clear.

The following blood tests have been obtained:

Hb	10.5 g/dl
MCV	95 fl
Platelets	160 * 10 ⁹ /l
WBC	13.4 * 10 ⁹ /l

Na ⁺	132 mmol/l
K ⁺	4.9 mmol/l
Urea	12 mmol/l
Creatinine	150 µmol/l
CRP	100 mg/l

Blood cultures grow coagulase negative staphylococci and you notice that during his previous admission in the hospital he also had positive blood cultures for coagulase-negative staphylococci.

What is the best next investigation?

	Repeat blood cultures
	Computed tomography thorax / abdomen / pelvis
	Biopsy of the rash
	Vasculitic screen
	Urgent transoesophageal echocardiogram

Dashboard

Overall score: 0%

1 -

□ Question 142 of 155



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Dashboard

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1 -

□ Question 142 of 155

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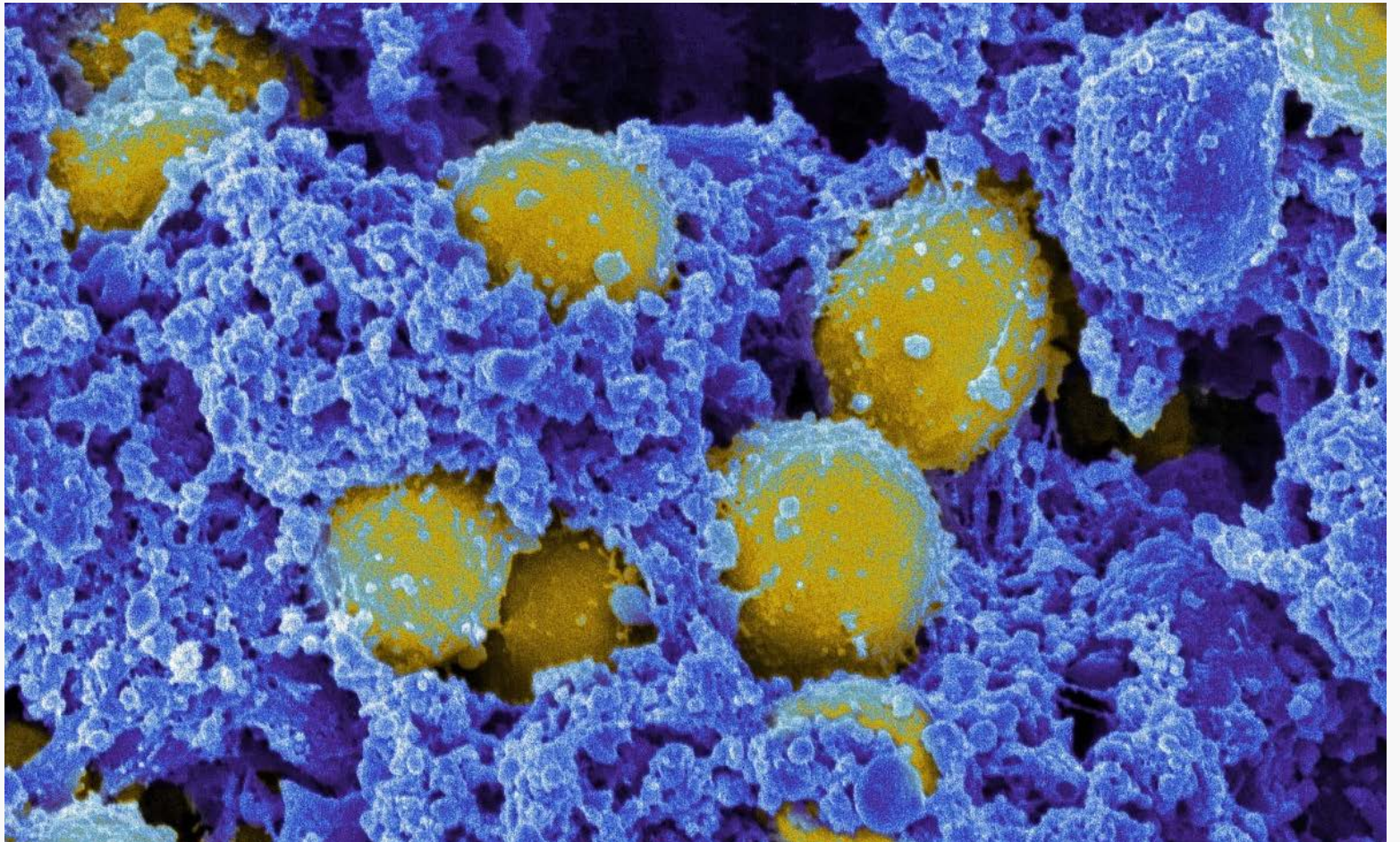
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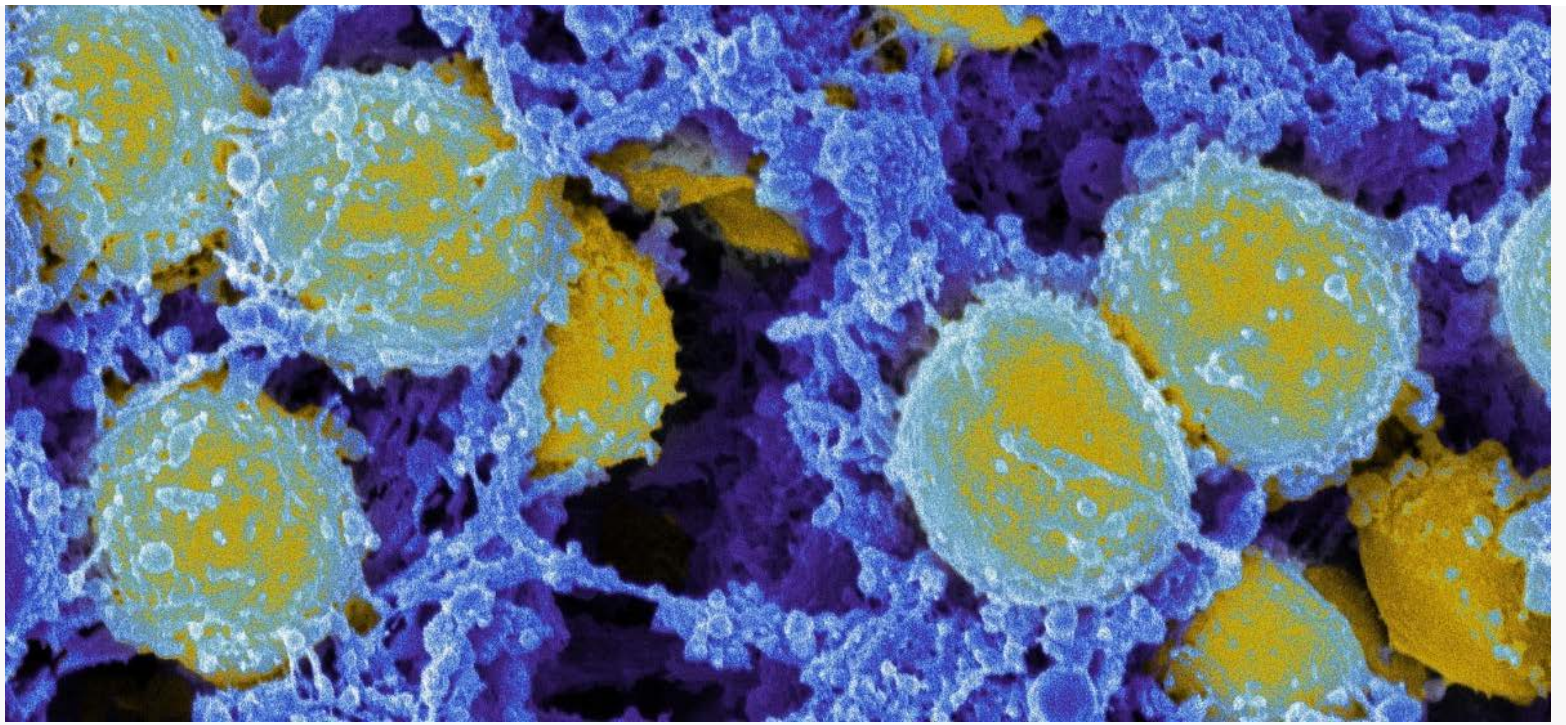
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	Repeat blood cultures
	Computed tomography thorax / abdomen / pelvis
	Biopsy of the rash
	Vasculitic screen
	Urgent transoesophageal echocardiogram

Dashboard

Overall score: **0%**
1 -





Question 143 of 155

□ □

A 23-year-old man attends the emergency department after arriving back in the UK from a one-year trip travelling in South America. He denies any acute medical problems but reports that he is concerned about a dog bite he had received in Brazil about three months previously. The patient had been on a rain-forest expedition when a dog from the village he was staying in became aggressive and bit him on the left hand, leaving a open wound. The local inhabitants of the village had then chased the dog away. The patient had received first aid from his tour guide and been provided with a course of oral antibiotics. The wound had then healed over the following two weeks. It was only when the patient had been speaking with fellow travellers shortly before he returned to the UK did he realise the possible risk for rabies exposure.

The patient was well in himself and denied any neurological or other symptoms. He had no significant past medical history and took no regular medications. He admitted that he had not adequately researched his travel health needs before leaving the UK and so had not had any vaccinations prior to his trip.

Examination of the patient's wound demonstrated fully healed scars consistent with bite marks across the palm and dorsal surface of the wrist. The limb had normal neurological and vascular examination and the patient reported normal function of the hand.

What is the correct statement regarding rabies post-exposure prophylaxis for this patient?

	The patient should receive rabies vaccination but not rabies immunoglobulin as his wound has now healed
	The patient does not require post-exposure prophylaxis as he remains free of symptoms following the incubation period of rabies
	The patient should receive rabies immunoglobulin and full rabies vaccination schedule
	The patient does not require rabies post-exposure prophylaxis as he did not receive his injury in a high-risk region
	The patient should receive rabies immunoglobulin but not rabies vaccination as this is only of benefit if given pre-exposure

Overall score: **0%**

1 -

Question 143 of 155

□ □

A 23-year-old man attends the emergency department after arriving back in the UK from a one-year trip travelling in South America. He denies any acute medical problems but reports that he is concerned about a dog bite he had received in Brazil about three months previously. The patient had been on a rain-forest expedition when a dog from the village he was staying in became aggressive and bit him on the left hand, leaving a open wound. The local inhabitants of the village had then chased the dog away. The patient had received first aid from his tour guide and been provided with a course of oral antibiotics. The wound had then healed over the following two weeks. It was only when the patient had been speaking with fellow travellers shortly before he returned to the UK did he realise the possible risk for rabies exposure.

The patient was well in himself and denied any neurological or other symptoms. He had no significant past medical history and took no regular medications. He admitted that he had not adequately researched his travel health needs before leaving the UK and so had not had any vaccinations prior to his trip.

Examination of the patient's wound demonstrated fully healed scars consistent with bite marks across the palm and dorsal surface of the wrist. The limb had normal neurological and vascular examination and the patient reported normal function of the hand.

What is the correct statement regarding rabies post-exposure prophylaxis for this patient?

	The patient should receive rabies vaccination but not rabies immunoglobulin as his wound has now healed
	The patient does not require post-exposure prophylaxis as he remains free of symptoms following the incubation period of rabies
	The patient should receive rabies immunoglobulin and full rabies vaccination schedule
	The patient does not require rabies post-exposure prophylaxis as he did not receive his injury in a high-risk region
	The patient should receive rabies immunoglobulin but not rabies vaccination as this is only of benefit if given pre-exposure

Overall score: **0%**

1 -

□ Question 144 of 155



A 45-year-old man is urgently referred to dermatology clinic by his general practitioner after presenting with erythema migrans on his left calf. The patient was very concerned about the possibility that he had contracted Lyme disease following his recent walking holiday in the Scottish highlands.

The patient reported returning from his holiday 2 weeks ago and first noticed the rash within the last 24 hours. The patient reported that he had undertaken long walks in the countryside wearing shorts but that he had not noticed any ticks becoming attached to his body during his holiday. Aside from the rash on his leg (described below) the patient reported no other symptoms at the present time or during recent weeks. In particular, the patient denied any symptoms involving the central or peripheral nervous systems.

The patient was in generally good physical health and his only past medical history was hypertension treated with ramipril by his GP. The patient had no known allergies to any medications.

Examination of the patient's left leg demonstrated a circular erythematous rash 15 cm in diameter. The rash demonstrated an appearance typical for erythema migrans, featuring a central spot surrounded by a ring of clear skin and an outer ring of erythema. The patient reported that the area covered by the rash had expanded significantly in the 24 hours since he had first noticed it. A detailed examination of the remaining surface of the patient's skin did not identify any other significant rashes. Examination of the peripheral and central nervous system did not demonstrate any signs of focal neurology. Examination of the cardiovascular, respiratory and abdominal systems was unremarkable. There was no evidence of palpable lymphadenopathy.

What is the appropriate management of this patient's erythema migrans?

	Serological testing for pathogenic <i>Borrelia</i> species
	Treat with doxycycline for 14 days
	No further investigation or treatment required due to absence of history of tick bite
	Review patient in two weeks and arrange serological tests if onset of symptoms or signs of Lyme borreliosis
	Review patient in two weeks and treat with doxycycline if onset of symptoms or signs of Lyme borreliosis

Overall score: **0%**

1 -

□ Question 144 of 155

□ □

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	Treat with doxycycline for 14 days
	No further investigation or treatment required due to absence of history of tick bite
	Review patient in two weeks and arrange serological tests if onset of symptoms or signs of Lyme borreliosis
	Review patient in two weeks and treat with doxycycline if onset of symptoms or signs of Lyme borreliosis

Dashboard

Overall score: **0%**

1 -

Question 145 of 155

□ □

A 39-year-old HIV-positive man complains of a two-week history of worsening headache, facial weakness and visual hallucinations. He also reports new onset eye pain. An MRI head reveals multiple ring-shaped contrast-enhancing lesions. He is regularly followed up in the HIV clinic and his latest CD4 count was 140 cells/mm³. Which treatment should be started immediately?

	Valganciclovir
	Trimethoprim + sulfamethoxazole
	Dexamethasone
	Pyrimethamine + sulfadiazine
	Ethambutol + rifampicin

Dashboard

Overall score: 0%

1 -

Question 145 of 155

□ □

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	Dexamethasone
	Pyrimethamine + sulfadiazine
	Ethambutol + rifampicin

Dashboard

Overall score: **0%**

1 -

□ Question 146 of 155



A 23-year-old woman presents to the emergency department. She was brought in by ambulance following left-sided weakness and difficulty in finding words. She also complains of a headache and nausea for the last three days. She has no past medical history and does not smoke nor does she drink alcohol. She recently emigrated from Tanzania to the UK.

On examination, she has marked weakness in upper and lower left limbs and is unable to walk without assistance. Her responses to questions are slow and limited.

Blood tests:

Hb	129 g/l
Platelets	$316 \times 10^9/l$
WBC	$8.9 \times 10^9/l$
Na ⁺	141 mmol/l
K ⁺	4.7 mmol/l
Urea	5.1 mmol/l
Creatinine	71 μ mol/l
HIV-1 serology	positive
HIV-2 serology	negative
HIV viral load	pending
CD4 count	pending
Toxoplasmosis serology	pending
Cryptococcal antigen	pending

A CT scan of her head demonstrates multiple ring-enhancing lesions and mass effect. Dexamethasone is started immediately. What is the most appropriate next step?

	Antiretroviral treatment
	Amphotericin
	Methotrexate
	MRI brain and whole spine
	Pyrimethamine and sulfadiazine

Dashboard

Overall score: **0%**
1 -

□ Question 146 of 155



A 23-year-old woman presents to the emergency department. She was brought in by ambulance following left-sided weakness and difficulty in finding words. She also complains of a headache and nausea for the last three days. She has no past medical history and does not smoke nor does she drink alcohol. She recently emigrated from Tanzania to the UK.

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Dashboard

Overall score: **0%**
1 -

Question 146 of 155



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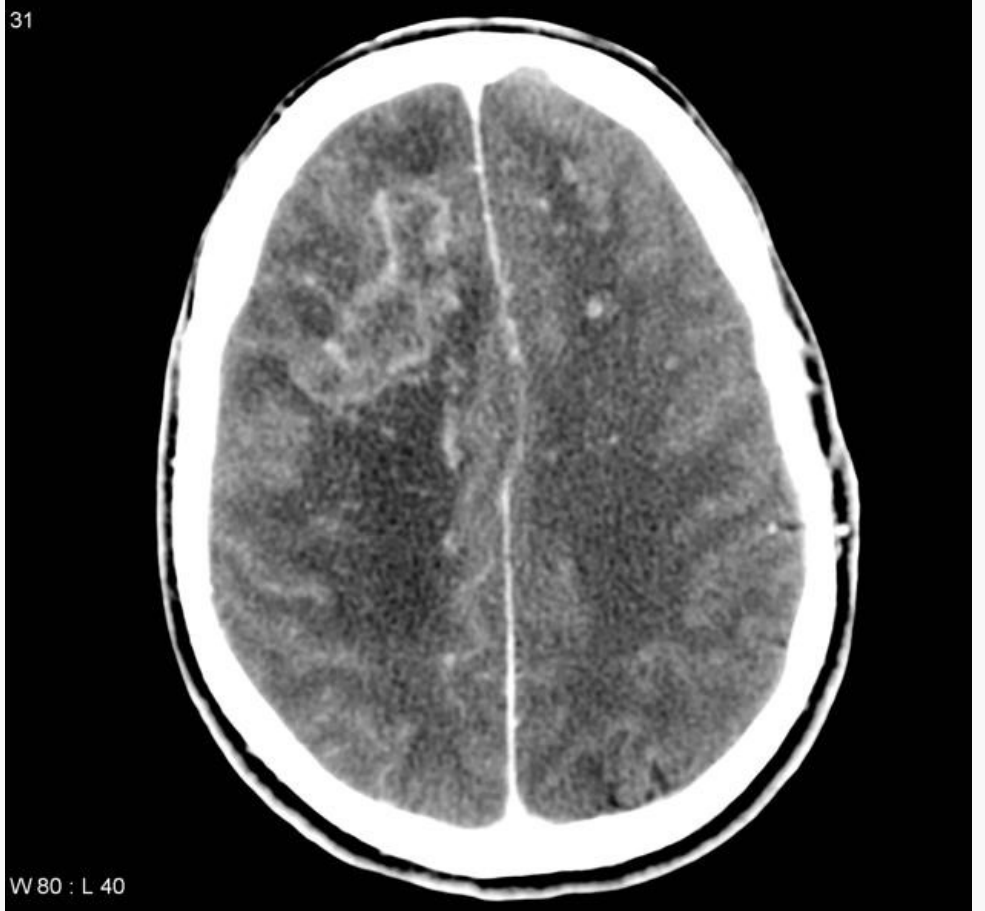
Dashboard

Overall score: 0%

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31

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Question 146 of 155



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	Amphotericin
	Methotrexate
	MRI brain and whole spine
	Pyrimethamine and sulfadiazine

Dashboard

Overall score: 0%



Question 146 of 155



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	Antiretroviral treatment
	Amphotericin
	Methotrexate
	MRI brain and whole spine
	Pyrimethamine and sulfadiazine

Dashboard

Overall score: 0%

7



W 114 : L 51

A 23-year-old woman presents to the emergency department. She was brought in by ambulance following left-sided weakness and difficulty in finding words. She also complains of a headache and nausea for the last three days. She has no past medical history and does not smoke nor does she drink alcohol. She recently emigrated from Tanzania to the UK.

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HIV viral load	pending
CD4 count	pending
Toxoplasmosis serology	pending
Cryptococcal antigen	pending

A CT scan of her head demonstrates multiple ring-enhancing lesions and mass effect. Dexamethasone is started immediately. What is the most appropriate next step?

	Antiretroviral treatment
	Amphotericin
	Methotrexate
	MRI brain and whole spine
	Pyrimethamine and sulfadiazine

Overall score: 0%

1 -



Question 147 of 155



A 23-year-old woman presents to GUM clinic. She reports that two days ago she had unprotected vaginal intercourse with a casual partner, who has informed her that he is HIV positive. He claimed to be taking treatment and having good viral control. He has given her a copy of his most recent letter from his HIV clinic confirming that he is on antiretroviral treatment and that his viral load has been <50 (undetectable) for the last year with a CD4 count of 745 cells/mm³. You are able to confirm the validity of this letter as the partner attends the same GUM clinic for his HIV care, and you are also able to confirm the investigations.

She has no past medical history and takes microgynon. She is concerned about catching HIV.

She has undergone STI screening today, including HIV serology. Microscopy is negative for any pathogens. A pregnancy test today is negative.

How should she be further managed?

	Advise repeat STI screen in two weeks and repeat HIV test 8-12 weeks
	Offer HIV post-exposure prophylaxis
	Advise repeat HIV test in 8-12 weeks
	Offer rapid antigen test for HIV and if positive then start HIV post-exposure prophylaxis
	Offer to refer to HIV clinic

Dashboard

Overall score: 0%

1 -

Question 147 of 155

□ □

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How should she be further managed?

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	Offer rapid antigen test for HIV and if positive then start HIV post-exposure prophylaxis
	Offer to refer to HIV clinic

Dashboard

Overall score: **0%**

1 -

□ Question 148 of 155



A 31 year-old accountant was referred to the general medical clinic with persistent nasal stuffiness and intermittent epistaxis. He had been seen by the ear, nose and throat team who had commenced him on a course of intranasal steroids without benefit. His past medical history was unremarkable. His travel history included a gap year in South America 10 years previously. He was a non-smoker and drank 23 units of alcohol per week.

On examination, his temperature was 36.2°C, heart rate 68 beats per minute, respiratory rate 16 breaths per minute, blood pressure 126/82 mmHg. There was some superficial ulceration of the nasal mucosa bilaterally. The chest was clear on auscultation and heart sounds were normal.

Investigations:

Haemoglobin	145 g/L
White cell count	$7.0 \times 10^9/l$
Neutrophil count	$4.0 \times 10^9/l$
Lymphocyte count	$3.0 \times 10^9/l$
Eosinophil count	$0.4 \times 10^9/l$
Platelets	$300 \times 10^9/l$

Sodium	144 mmol/L
Potassium	4.1 mmol/L
Urea	6.1 mmol/L
Creatinine	71 mol/L
Alkaline phosphatase	56 IU/L
Alanine aminotransferase	35 IU/L
Gamma-glutyl transferase	21 IU/L

Bilirubin	13 mol/L
Albumin	39 g/L
Fasting plasma glucose	5.3 mmol/L

What is the most likely causative organism?

<input type="radio"/>	<i>Trypanosoma cruzi</i>
<input type="radio"/>	<i>Plasmodium ovale</i>
<input type="radio"/>	<i>Leishmania braziliensis</i>
<input type="radio"/>	<i>Leishmania donovani</i>
<input type="radio"/>	<i>Chlamydia trachomatis</i>

Dashboard

Overall score: **0%**

1 -

Question 148 of 155



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Dashboard

Overall score: **0%**
1 -

Question 149 of 155

□ □

A 33-year-old male with a previous history of asthma and HIV presents for review to HIV clinic. He has been noticing weight gain, marks on his abdomen and his partner has noticed that his face has been looking more heavy-set over the last two months. He was diagnosed as having HIV at the age of 19 following needle sharing and use of heroin. He has had good retroviral control following starting treatment at the age of 20 with tenofovir, emtricitabine, atazanavir and ritonavir. His asthma has been well controlled with only salbutamol until six months ago when due to recurrent exacerbation due to upper respiratory tract infection his treatment was escalated to include regular fluticasone. Repeat blood tests show an undetectable viral load and a CD4 count of 900 cells/microliter. What is the most likely cause of his symptoms?

	Weight gain secondary to tenofovir use
	Weight gain secondary to emtricitabine use
	Weight gain due to reduced exercise tolerance
	Endogenous Cushing's syndrome
	Iatrogenic Cushing's syndrome

Dashboard

Overall score: 0%

1 -

Question 149 of 155



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	Iatrogenic Cushing's syndrome

Dashboard

Overall score: 0%
1 -

Question 150 of 155

□ □

The Medical Emergency Team (MET) is summoned to the Surgical Unit to assist with the management of an acutely unwell patient.

The patient is a 21-year-old male who underwent open surgery for perforated appendicitis 3 days ago. The Surgical Registrar informs you that faecal contamination of the abdomen was noted during the operation and that a peritoneal washout was performed.

24 hours later, the patient began to complain of worsening abdominal pain. He became febrile in the early hours of the morning and blood cultures were taken. Since then, he has become progressively more unwell. He was taken down for an urgent abdominal ultrasound mid-afternoon, but the nurses were so concerned about his condition when he arrived back on the ward that a MET call was put out.

On examination, the patient is responsive to voice. He is febrile at 38.9°C, his pulse is 131bpm and his blood pressure is 72/53mmHg. His peripheries are warm and clammy. Palpation of the abdomen reveals localised tenderness and guarding in the right iliac fossa. The surgical wound appears clean with minimal surrounding erythema.

As you prepare to place a large bore IV cannula the Surgical FY1 passes you some results that have recently been phoned through:

Abdominal ultrasound	Anechoic fluid collection in the right iliac fossa
Blood culture	Gram-positive cocci both bottles - further information to follow

Which of the following organisms is most likely to be isolated from the blood culture?

	Staphylococcus epidermidis
	Escherichia coli
	Streptococcus pyogenes
	Enterococcus faecalis

Dashboard

Overall score: **0%**

1 -

Question 150 of 155

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Dashboard

Overall score: **0%**

1 -

Question 150 of 155

The Medical Emergency Team (MET) is summoned to the Surgical Unit to see an unwell patient.

The patient is a 21-year-old male who underwent open surgery for perforated sigmoid diverticulum. The Registrar informs you that faecal contamination of the abdomen was noted and a laparotomy washout was performed.

24 hours later, the patient began to complain of worsening abdominal pain. In the morning and blood cultures were taken. Since then, he has become progressively unwell. An urgent abdominal ultrasound mid-afternoon, but the nurses were so concerned that a MET call was put out.

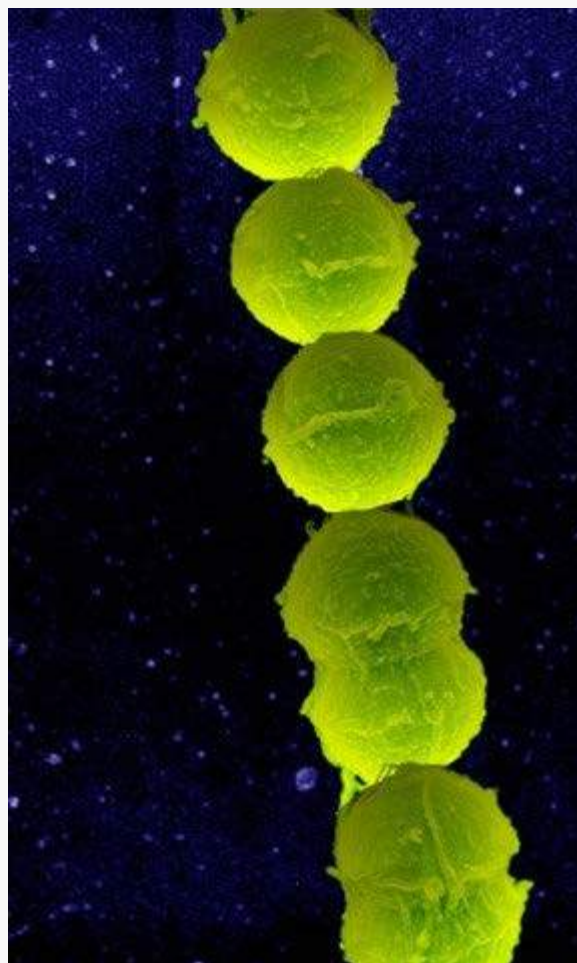
On examination, the patient is responsive to voice. He is febrile at 38.9°C, tachycardic at 110 bpm, BP 72/53mmHg. His peripheries are warm and clammy. Palpation of the abdomen reveals tenderness and guarding in the right iliac fossa. The surgical wound appears clean with minimal surrounding erythema.

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Dashboard

Overall score: **0%**

1 -

Question 151 of 155

□ □

A 30-year-old man is repatriated to the UK from China after being savaged by a dog. He had been working in rural China as an engineer with a non-government organisation. Ten days previously he had been attacked by dog in the street and bitten repeatedly on the right arm. The dog was reported as having been acting very aggressively. It had subsequently been caught and euthanised.

The patient had received prompt local medical attention. His wounds had been washed out in theatre and a course of intravenous antibiotics commenced. Due to issues with tissue loss and possible tendon damage he had been repatriated to the UK for plastic surgery.

As part of the above treatment, the patient had received a full dose of rabies immunoglobulin infiltrated into his wounds two days after the assault. Medical records sent with the patient stated that a course of rabies vaccination had also been initiated, with three doses given so far at day 1, day 4 and day 8 after the injury. The vaccination schedule to date is consistent with the 5 dose Essen regime recommended by the WHO. To complete this schedule, two further doses of vaccination should be given at 14 and 28 days after the first dose.

The recorded serial number of the vaccinations given was checked and found to represent a form of nerve tissue vaccination. On review of current UK supplies this was not found to be available, with only cell culture and embryonate egg-based vaccinations (CCEEVs) in stock. It was also confirmed with the patient that he had never received a course of rabies vaccination previously.

What is the correct ongoing management of this patient's rabies post-exposure prophylaxis?

	Complete vaccination schedule with imported nerve tissue vaccine
	Additional dose rabies immunoglobulin and complete vaccination schedule using available CCEEVs
	Additional dose rabies immunoglobulin and restart vaccination schedule using available CCEEV
	Restart vaccination schedule using available CCEEVs
	Complete vaccination schedule using available CCEEVs

Overall score: **0%**

1 -

Question 151 of 155

□ □

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Dashboard

Overall score: **0%**

1 -

Question 152 of 155

□ □

A 19-year-old man attends the Emergency department with a fever for the past one week. He notes that the fever comes on alternate days. He reports also a co-existing headache, but no other particular symptoms. Of note, he returned from Afghanistan two weeks ago. Examination reveals a temperature of 38.1°C, heart rate 89/min, blood pressure 123/78 mmHg, respiratory rate 17/min and oxygen saturations of 99%. There is no evidence of no neck stiffness, objective photophobia, jaundice or splenomegaly.

What is the most likely diagnosis?

	Chikungunya
	Zika virus
	Plasmodium vivax
	Plasmodium falciparum
	Dengue fever

Dashboard

Overall score: 0%

1 -

Question 152 of 155

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What is the most likely diagnosis?

<input type="checkbox"/>	Chikungunya
<input type="checkbox"/>	Zika virus
<input checked="" type="checkbox"/>	Plasmodium vivax
<input type="checkbox"/>	Plasmodium falciparum
<input type="checkbox"/>	Dengue fever

Dashboard

Overall score: **0%**

1 -

Question 153 of 155

□ □

A 23-year-old man presents for the second time to HIV clinic. He was found to have positive HIV serology on opportunistic screening in a local GUM clinic and was referred to HIV services. He had originally presented with dysuria and had been diagnosed with non-specific urethritis and treated with doxycycline. Following his diagnosis, he has separated with his partner, as she feared contracting HIV from him. He is anxious with managing his disease and is keen to start treatment. He has no other symptoms, feeling systemically well and no significant past medical history.

During his previous consultation, his diagnosis was discussed with him, and the role of antiretroviral treatment was fully explained.

Blood tests:

Hb	134 g/l
Platelets	$378 \times 10^9/l$
WBC	$7.2 \times 10^9/l$
Na ⁺	141 mmol/l
K ⁺	4.1 mmol/l
Urea	4.6 mmol/l
Creatinine	64 μ mol/l
HIV viral load	223 copies/ml
CD4 count	914 cells/mm ³

What is the most appropriate management plan offer?

	Start antiretroviral therapy and PCP prophylaxis
	Start antiretroviral therapy
	Start treatment when CD4 count becomes <350

	Start treatment when CD4 count becomes <550
	Start treatment once HIV related symptoms develop

Dashboard

Overall score: 0%

1 -

Question 153 of 155

□ □

A 23-year-old man presents for the second time to HIV clinic. He was found to have positive HIV serology on opportunistic screening in a local GUM clinic and was referred to HIV services. He had originally presented with dysuria and had been diagnosed with non-specific urethritis and treated with doxycycline. Following his diagnosis, he has separated with his partner, as she feared contracting HIV from him. He is anxious with managing his disease and is keen to start treatment. He has no other symptoms, feeling systemically well and no significant past medical history.

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Dashboard

Overall score: **0%**
1 -

Question 153 of 155

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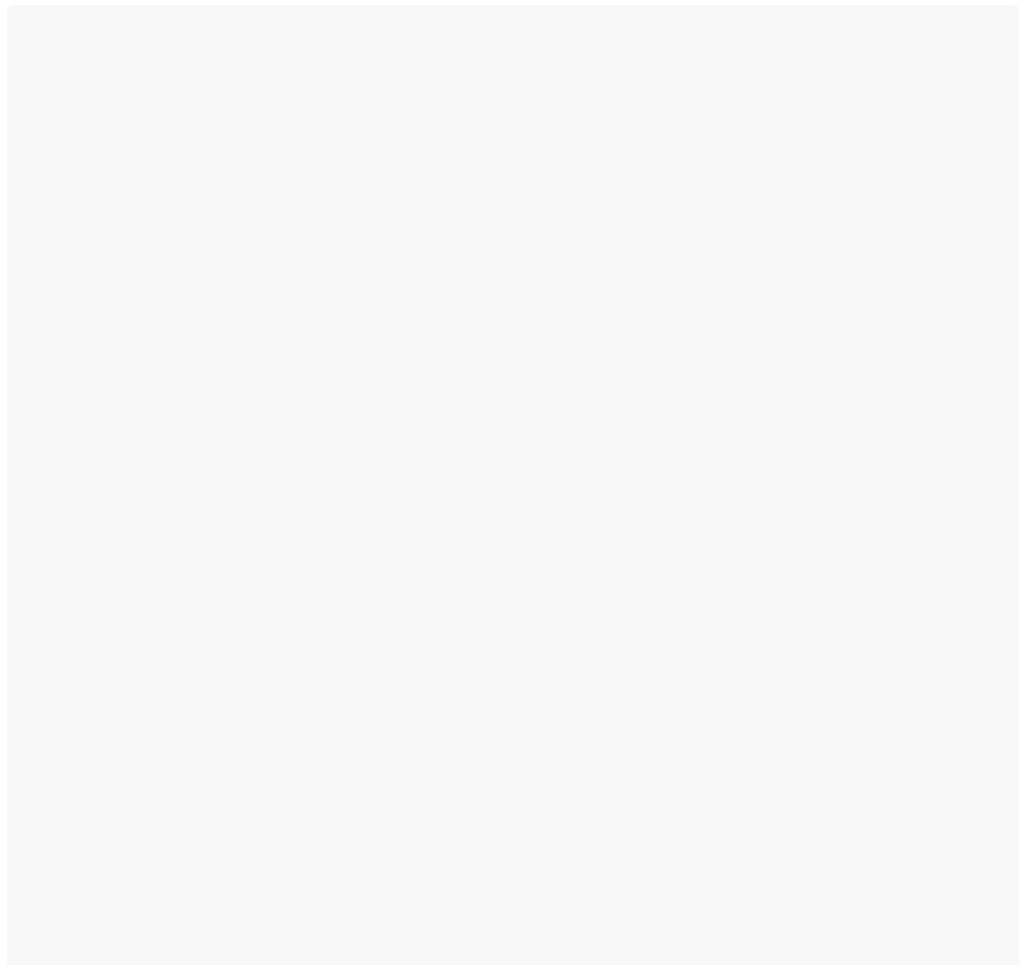
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Dashboard

Overall score: 0%

1 -



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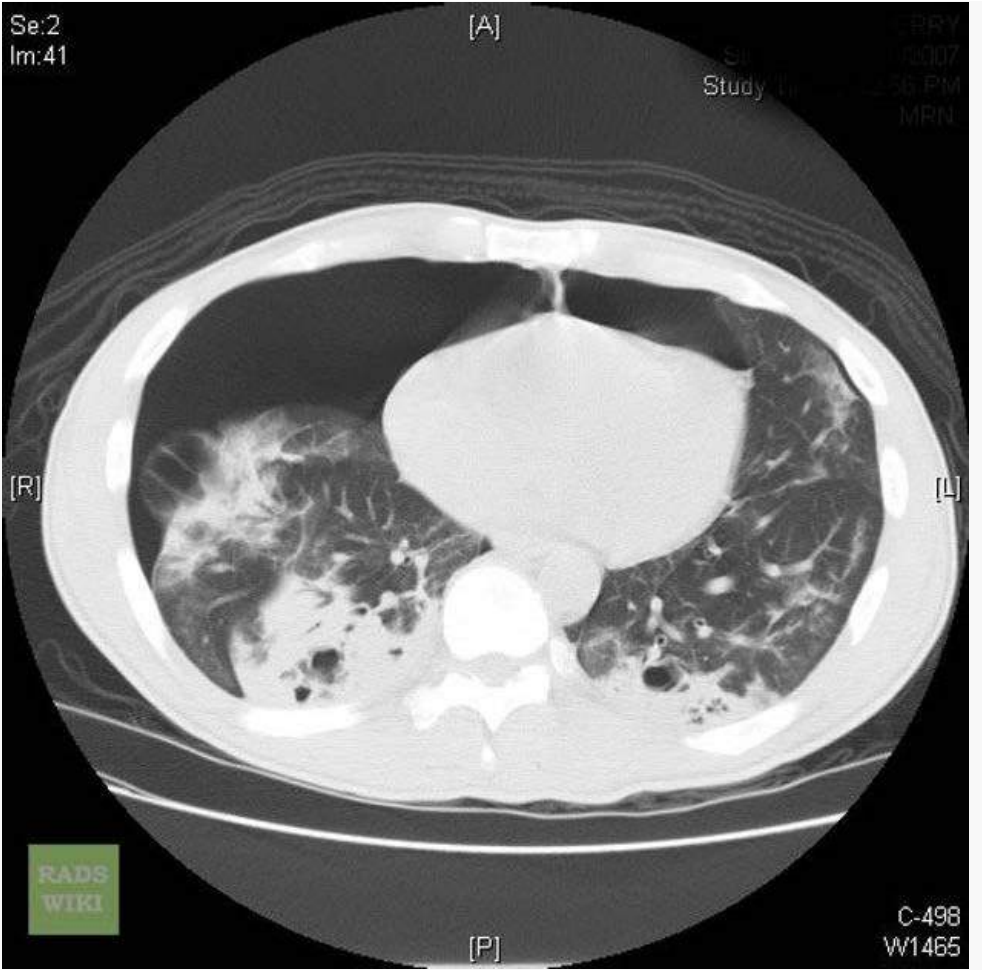
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□ Question 154 of 155

□ □

A 35-year-old man is reviewed in respiratory clinic with symptoms of a chronic cough with occasional haemoptysis, night sweats and significant unintentional weight loss. The patient is originally from the Russian Federation and on direct questioning through an interpreter discloses that he had spent five years in a Moscow prison for drugs offences. Aside from a period of alcohol abuse in his early twenties, the patient denies any other medical history and takes no medications. He currently is living in shared accommodation and works on a building site, although he is struggling to continue to work due to his current illness.

General inspection showed the patient to be cachexic with tobacco stained fingernails. Auscultation of the chest revealed some reduced air entry in the upper zones bilaterally. There was palpable lymphadenopathy in the anterior cervical chain.

Please see results of investigations below.

Chest x-ray: patchy shadowing in both upper lobes with evidence of cavity formation on the right side; no pneumothorax; normal mediastinal shadow.

Sputum microscopy: acid fast bacilli

Phenotypic indirect drug susceptibility testing: rifampicin (resistant); ofloxacin (sensitive); moxifloxacin (sensitive); isoniazid (resistant); amikacin (sensitive); capreomycin (sensitive).

What is the most appropriate treatment regime for this patient?

	Combination therapy with 5 drugs for 24-36 months
	Combination therapy with 5 drugs for 18-24 months
	Combination therapy with 4 drugs for 24-36 months
	Combination therapy with 4 drugs for 12 months
	Combination therapy with 4 drugs for 18-24 months

Overall score: **0%**

1 -

□ Question 154 of 155

□ □

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	Combination therapy with 4 drugs for 12 months
	Combination therapy with 4 drugs for 18-24 months

Dashboard

Overall score: **0%**

1 -

Question 155 of 155

□ □

You are called to see a 50-year-old Indian gentleman who has presented to the Emergency Department (ED) from Heathrow airport. He gives a 3 week history of a brown productive cough associated with fevers and drenching night sweats. He denies any weight loss or haemoptysis, however his wife is concerned that his sputum has been very brown/red in colour since his illness started. On further questioning you find that the patient is a resident of a rural community in north east India and is visiting family who live in London. He is a non-smoker and had been in very good health apart from a bout of diarrhoea several weeks ago.

On examination of the patient he appears relatively well, his heart rate is 95 beats per minute and respiratory rate is 20 breaths per minute. You note that he has a productive cough, producing dark brown sputum which you send for routine microscopy sensitivity and culture (MC&S) and acid fast bacilli (AFB) and tuberculosis PCR. On auscultation of his chest you hear coarse crepitations at the right base with some bronchial breathing. The remainder of his physical examination is unremarkable.

You perform a number of investigations described below

Hb	110 g/l	Na ⁺	138 mmol/l
Platelets	500 * 10 ⁹ /l	K ⁺	4.5 mmol/l
WBC	16.0 * 10 ⁹ /l	Urea	6.0 mmol/l
Neuts	10.0 * 10 ⁹ /l	Creatinine	99 µmol/l
Lymphs	2.0 * 10 ⁹ /l	CRP	55 mg/l
Eosin	2.0 * 10 ⁹ /l		
Sputum MC&S	Negative		
Sputum AFB	Negative		
Chest X-Ray	Right lower zone consolidation		

What is the likely diagnosis?

Tuberculosis

	Streptococcal pneumonia
	Paragonimiasis
	Malignancy
	Pulmonary Haemorrhage

Dashboard

Overall score: **0%**

1 -

□ Question 155 of 155

□

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Sputum MC&S	Negative		
Sputum AFB	Negative		
Chest X-Ray	Right lower zone consolidation		

What is the likely diagnosis?

Tuberculosis

	Streptococcal pneumonia
	Paragonimiasis
	Malignancy
	Pulmonary Haemorrhage

Dashboard

Overall score: **0%**
1 -

□ Question 1 of 280

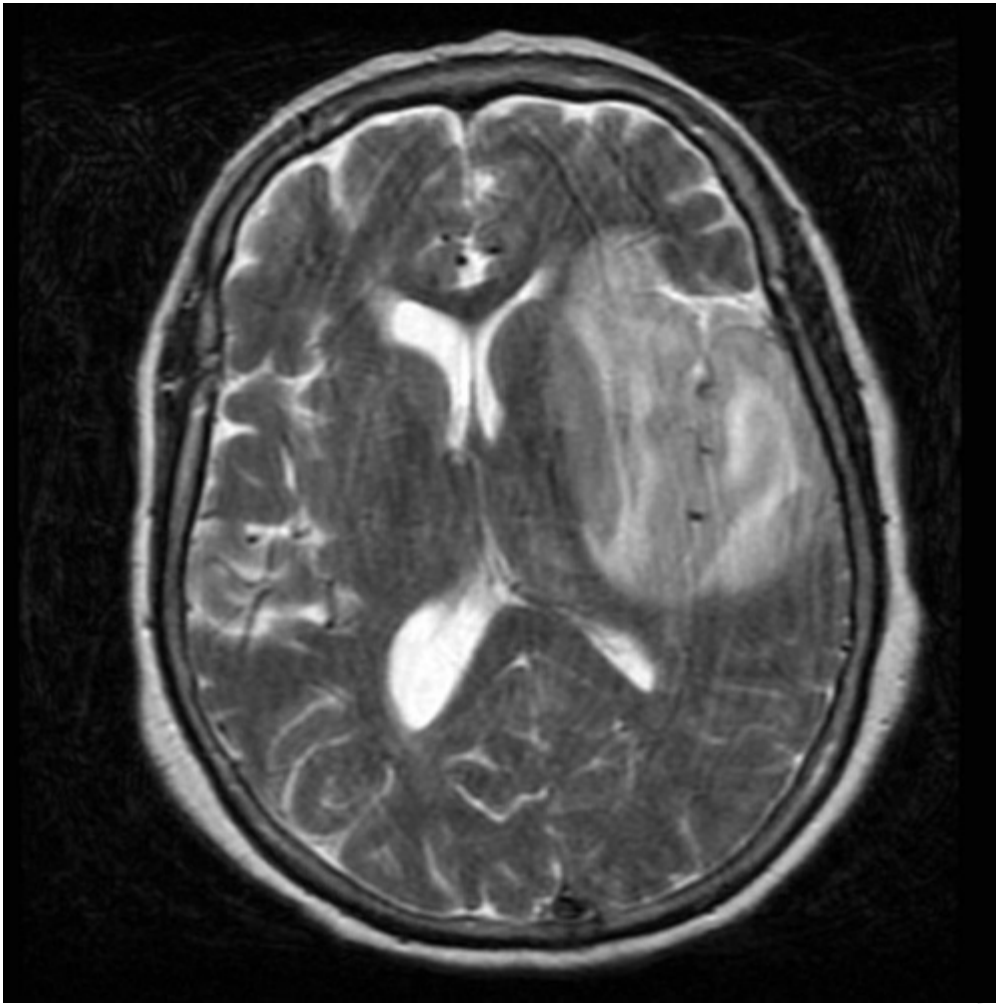
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A 56-year-old businessman is admitted to the Emergency Department after suffering a seizure. His wife reports that he has been acting 'strange' for the past few days. She has noticed in particular that he has been 'slow' complaining of feeling tired all the time and also having difficulty finding the right words.

One hour after the seizure had terminated the patient remained confused and appeared to have an ataxic gait after getting up from his bed. During the history he repeatedly said the word 'headache'.

On examination his pulse was 84/min, blood pressure 108/74 mmHg, blood sugar 5.2 mmol/l and temperature 37.9°C.

A **MRI** was requested:



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What is the most likely diagnosis?

	Glioblastoma multiforme
	Herpes simplex encephalitis
	Cerebral abscess
	Cerebral toxoplasmosis
	Meningioma

Dashboard

Overall score: 0%

1 -

□ Question 1 of 280

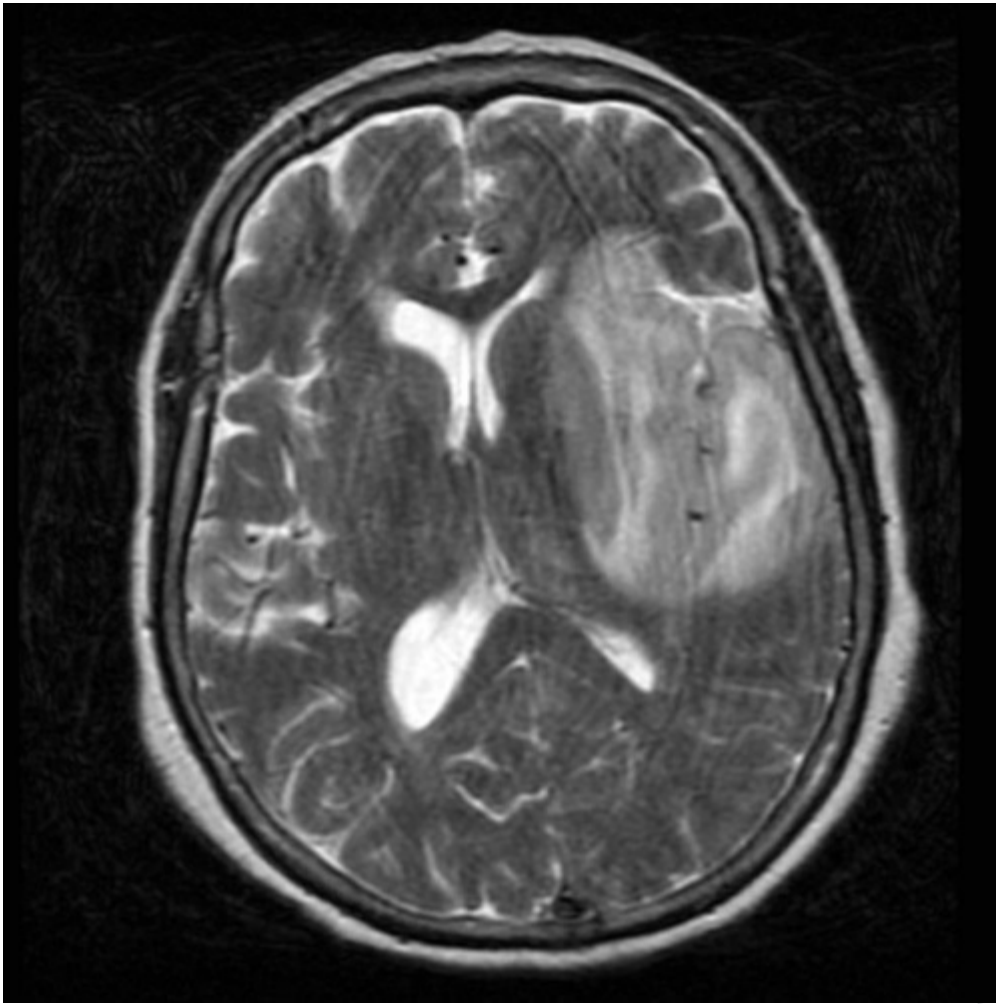
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Dashboard

Overall score: **0%**

1 -

□ Question 1 of 280

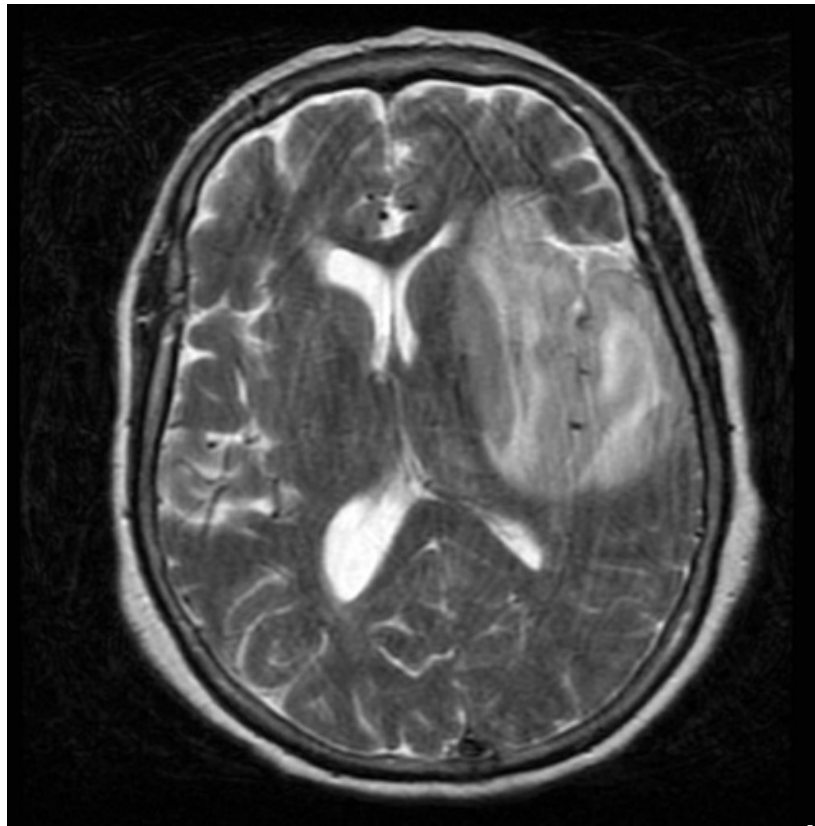
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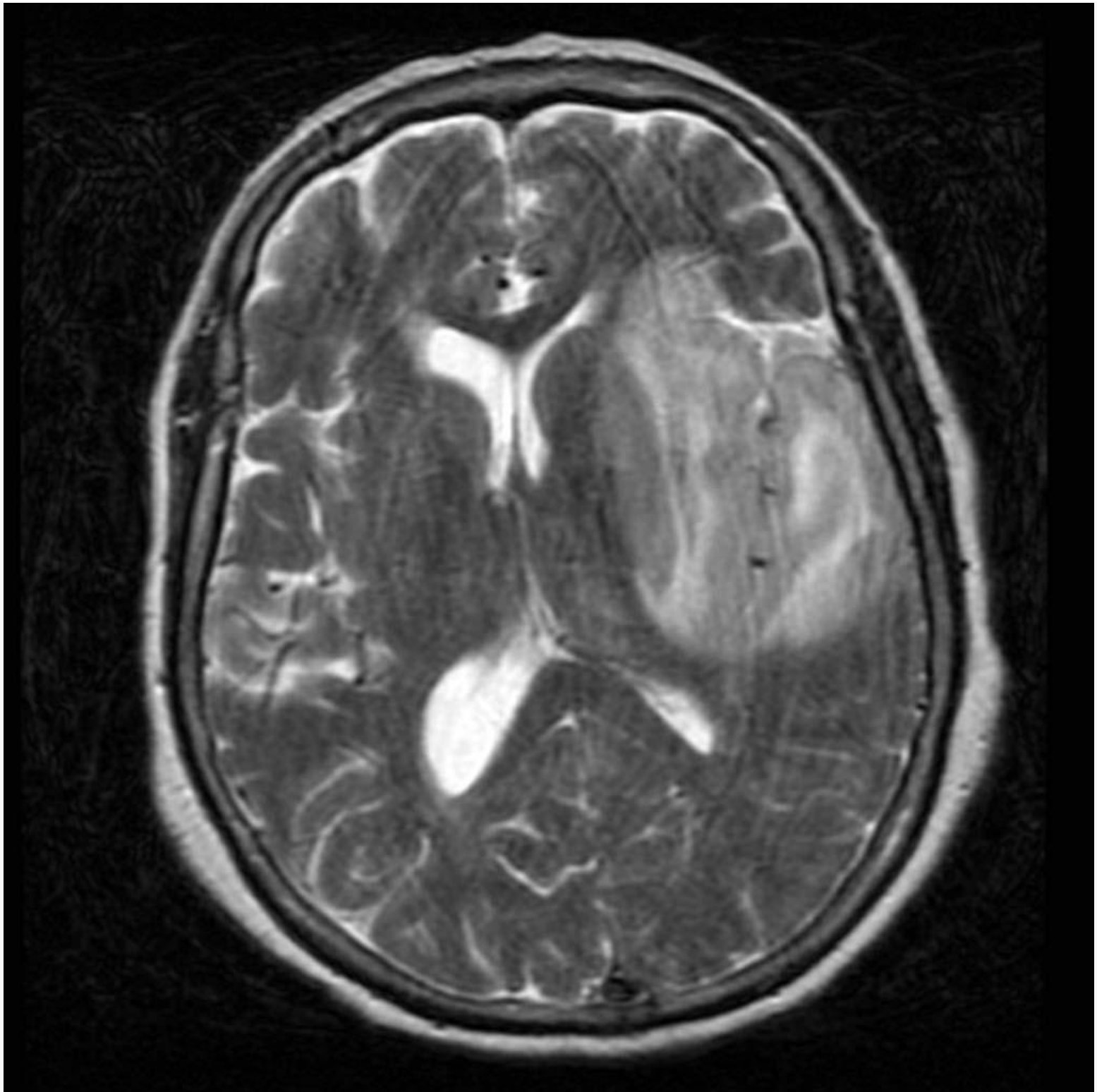
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Dashboard

Overall score: 0%

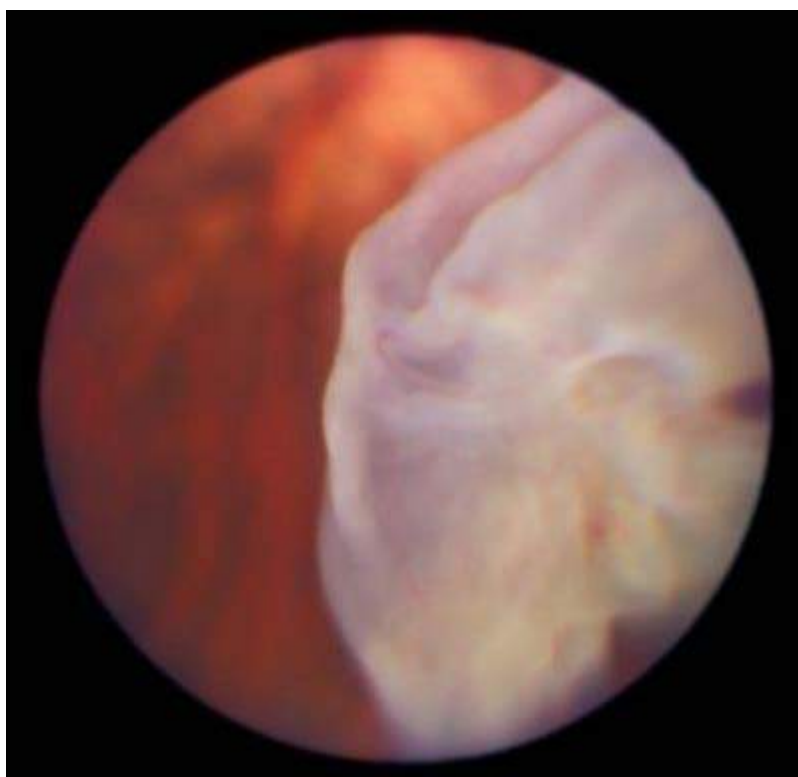
1 -



Question 2 of 280



A 71-year-old man presents with sudden painless loss of vision in his left eye: Fundoscopy shows the following:



What is the most likely diagnosis?

<input type="checkbox"/>	Ciliary body rupture with lens dislocation
<input type="checkbox"/>	Vitreous haemorrhage
<input type="checkbox"/>	Ischaemic optic neuropathy
<input type="checkbox"/>	Central retinal artery

	Retinal detachment
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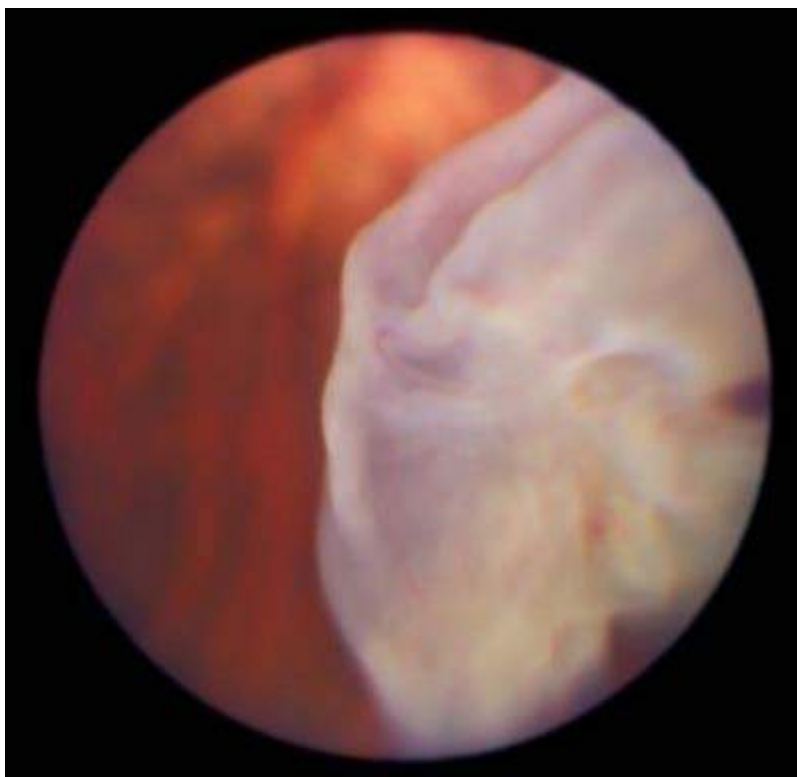
Dashboard

Overall score: **0%**
1 -

□ Question 2 of 280



A 71-year-old man presents with sudden painless loss of vision in his left eye: Fundoscopy shows the following:



What is the most likely diagnosis?

	Ciliary body rupture with lens dislocation
	Vitreous haemorrhage
	Ischaemic optic neuropathy
	Central retinal artery

Retinal detachment

Dashboard

Overall score: **0%**

1 -

Question 3 of 280

A 43-year-old right-handed female legal secretary has presented into your general medical clinic in an extremely distressed state. Over the past 2 weeks, she has been 'unable to write'. When questioned further, she reports that she 'wants to write but my hand just stops as soon as I pick up the pen.' She has no past medical history, lives with her husband and is a non-smoker and non-drinker. On examination, her neurological examination is unremarkable. You ask her to write. Her hand and fingers suddenly flex, resulting in illegible handwriting. What is the most likely diagnosis?

<input type="checkbox"/>	Psychogenic functional neurology
<input type="checkbox"/>	Focal dystonia
<input type="checkbox"/>	Dominant parietal lobe space occupying lesion
<input type="checkbox"/>	Right median nerve palsy
<input type="checkbox"/>	Brachial plexopathy

Dashboard

Overall score: 0%

1 -

Question 3 of 280

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	Psychogenic functional neurology
	Focal dystonia
	Dominant parietal lobe space occupying lesion
	Right median nerve palsy
	Brachial plexopathy

Dashboard

Overall score: **0%**

1 -

□ Question 4 of 280



A 32 year old presents with a 6 month history of progressive lower limb weakness and suprapubic tenderness. On examination, cranial nerves and upper limbs were unremarkable. You note 1/5 power in both lower limbs, hyper-reflexic patella and ankle reflexes, bilateral clonus and upgoing plantar reflexes. Abdominal examination also revealed a suprapubic mass. After a urethral catheter was inserted, you note a residual volume of 1.8l. She is known to be HIV positive, diagnosed 8 years ago. Blood tests from an outpatient appointment revealed:

CMV IgG	positive
EBV IgG	positive
HTLV antibody	positive
Hepatitis B	negative
Hepatitis C	negative

An MRI spine is awaited. What is the likely diagnosis?

	Tropical spastic paraparesis
	Spinal toxoplasmosis
	CMV transverse myelitis
	EBV transverse myelitis
	Tabes dorsalis

Dashboard

Overall score: 0%

1 -

□ Question 4 of 280

□ □

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EBV IgG	positive
HTLV antibody	positive
Hepatitis B	negative
Hepatitis C	negative

An MRI spine is awaited. What is the likely diagnosis?

	Tropical spastic paraparesis
	Spinal toxoplasmosis
	CMV transverse myelitis
	EBV transverse myelitis
	Tabes dorsalis

Dashboard

Overall score: **0%****1** -

□ Question 5 of 280



A 24 year old man presents to the accident and emergency department with his girlfriend after collapsing in a nightclub at 0400hrs. It is now 0600hrs On examination he is V on the AVPU scale with dry mucous membranes, he has flushed skin and feels very warm to the touch. There is mildly increased muscle tone, myoclonic jerks and hyperreflexia globally but worse in the lower limbs. Pupils are dilated but respond to light equally and bilaterally. He is disorientated and agitated during the examination, thrashing about in the bed and occasionally lashing out at people

Heart rate 126/min, blood pressure 90/60 mmHg, respiratory rate 18/min, temperature = 40.3°C, sats 97% on 10l of oxygen.

Na ⁺	136 mmol/l
K ⁺	3.9 mmol/l
Urea	2.3 mmol/l
Creatinine	77 µmol/l
Glucose	4.6 mmol/l
Creatinine kinase	12,000 U/l

Bilirubin	25 µmol/l
ALP	185 u/l
ALT	125 u/l
γGT	144 u/l
Albumin	40 g/l

CT Head: No abnormality detected.

Lumbar puncture reveals:

Opening pressure	15 cmCSF
Appearance	Clear
Glucose	3.5 mmol/l
Protein	0.3 g/l
White cells	4 / mm ³

He has a past medical history of Schizoaffective disorder. His girlfriend shows you his regular medications, the prescription has been unchanged for 1 year. Olanzapine 15mg and Sertraline 150mg. His girlfriend tells you that he took an unknown white powder whilst in the club

What is the most appropriate treatment plan?

<input type="radio"/>	IV Ceftriaxone
<input type="radio"/>	Stop Olanzapine and give dantrolene
<input type="radio"/>	Stop sertraline and give IV lorazepam and consider cyproheptadine
<input type="radio"/>	Give IV naloxone
<input type="radio"/>	Stop olanzapine and sertraline and supportive therapy

Dashboard

Overall score: **0%**

1 -

Question 5 of 280



A 24 year old man presents to the accident and emergency department with his girlfriend after collapsing in a nightclub at 0400hrs. It is now 0600hrs On examination he is V on the AVPU scale with dry mucous membranes, he has flushed skin and feels very warm to the touch. There is mildly increased muscle tone, myoclonic jerks and hyperreflexia globally but worse in the lower limbs. Pupils are dilated but respond to light equally and bilaterally. He is disorientated and agitated during the examination, thrashing about in the bed and occasionally lashing out at people

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Bilirubin	25 µmol/l
ALP	185 u/l
ALT	125 u/l
γGT	144 u/l
Albumin	40 g/l

CT Head: No abnormality detected.

Lumbar puncture reveals:

Opening pressure	15 cmCSF
Appearance	Clear
Glucose	3.5 mmol/l
Protein	0.3 g/l
White cells	4 / mm ³

He has a past medical history of Schizoaffective disorder. His girlfriend shows you his regular medications, the prescription has been unchanged for 1 year. Olanzapine 15mg and Sertraline 150mg. His girlfriend tells you that he took an unknown white powder whilst in the club

What is the most appropriate treatment plan?

	IV Ceftriaxone
	Stop Olanzapine and give dantrolene
	Stop sertraline and give IV lorazepam and consider cyproheptadine
	Give IV naloxone
	Stop olanzapine and sertraline and supportive therapy

Dashboard

Overall score: **0%**

1 -

Question 6 of 280



You are asked to see a 57 year-old female who has presented acutely to eye clinic with deteriorating vision. On questioning she has experienced sudden blurring of the temporal field in her right eye. Her past medical history is noteworthy for hypertension and type 2 diabetes mellitus.

What is the likely diagnosis?

	Branch retinal artery occlusion
	Nasal retinal detachment
	Central retinal vein occlusion
	Temporal branch retinal vein occlusion
	Nasal branch retinal vein occlusion

Dashboard

Overall score: 0%

1 -

Question 6 of 280

You are asked to see a 57 year-old female who has presented acutely to eye clinic with deteriorating vision. On questioning she has experienced sudden blurring of the temporal field in her right eye. Her past medical history is noteworthy for hypertension and type 2 diabetes mellitus.

What is the likely diagnosis?

<input type="radio"/>	Branch retinal artery occlusion
<input type="radio"/>	Nasal retinal detachment
<input type="radio"/>	Central retinal vein occlusion
<input type="radio"/>	Temporal branch retinal vein occlusion
<input checked="" type="radio"/>	Nasal branch retinal vein occlusion

Dashboard

Overall score: **0%**

1 -

□ Question 7 of 280

□ □

A 50-year-old woman is admitted to the Emergency Department. She has a long history of drug and alcohol abuse and is well known to staff. From her records you can see that she is known to have chronic hepatitis C. A HIV test 6 months ago was negative. She is brought in after having a seizure whilst in police custody. The paramedics describe a generalised tonic-clonic seizure which terminated after 10mg of rectal diazepam was administered.

On admission she is drowsy and demands morphine for her headache. Her pulse is 84/min, blood pressure 116/80 mmHg and temperature 37.2°C. A full neurological examination is not possible as she is drowsy and combative.

A CT scan is arranged:



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What is the most likely diagnosis?

	Glioblastoma multifome
	Cerebral toxoplasmosis
	Meningioma
	Extradural haematoma
	Herpes simplex encephalitis

Dashboard

Overall score: 0%

1 -

□ Question 7 of 280

□ □

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Dashboard

Overall score: **0%**

1 -

Question 7 of 280



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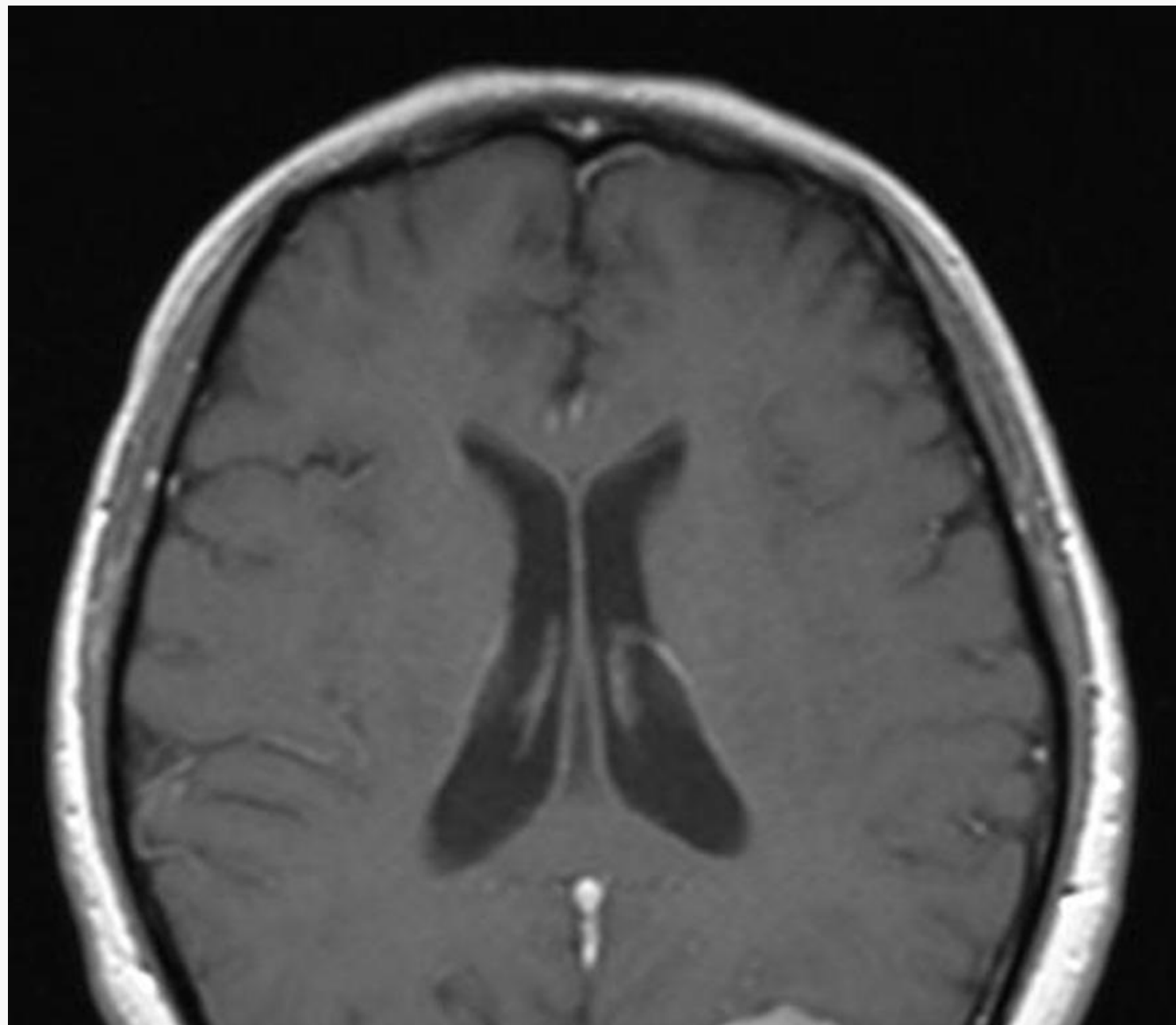
What is the most likely diagnosis?

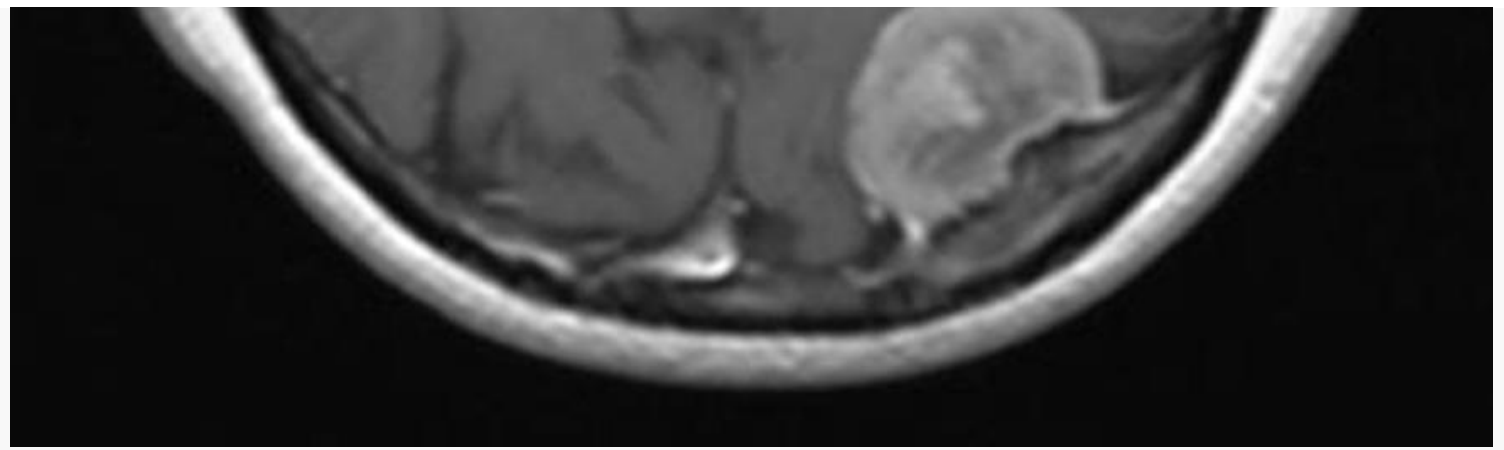
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	Meningioma
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	Herpes simplex encephalitis

Dashboard

Overall score: **0%**

1 -





□ Question 7 of 280

□ □

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On admission she is drowsy and demands morphine for her headache. Her pulse is 84/min, blood pressure 116/80 mmHg and temperature 37.2°C. A full neurological examination is not possible as she is drowsy and combative.

A CT scan is arranged:



What is the most likely diagnosis?

	Glioblastoma multifome
	Cerebral toxoplasmosis
	Meningioma
	Extradural haematoma
	Herpes simplex encephalitis

Dashboard

Overall score: 0%

1 -



□ Question 8 of 280



A 44 year-old man presents to the neurology clinic. He complains of weakness in the right hand, which causes difficulty with tasks such as writing and dressing, and has also noted 'twitching' in his right forearm and hand. He cannot recall exactly when the symptoms first began but feels that they have certainly been present for at least six months, and that they have got worse.

He is otherwise fit and well. His only past medical history is well-controlled asthma. There is no family history of neurological disease.

Cranial nerve examination is normal. On examination of the right hand, there is weakness of extension of the the middle and ring fingers (2/5 on the MRC scale), but no discernible muscle wasting. Fasciculations are visible in the dorsal aspect of the forearm. On examination of the left hand, there is also some subtle weakness of extension of the ring finger (4/5 on the MRC scale). There is no weakness of wrist extension on either side and power in all other muscle groups is normal. For both hands, all the fingers extend when the wrist is passively moved into palmar flexion. All reflexes are normal and there are no sensory signs.

What is the most likely diagnosis?

<input type="checkbox"/>	Multifocal motor neuropathy
<input type="checkbox"/>	Chronic inflammatory demyelinating polyneuropathy
<input type="checkbox"/>	Motor neuron disease (amyotrophic lateral sclerosis)
<input type="checkbox"/>	Inclusion body myositis
<input type="checkbox"/>	Ruptured tendon of extensor digitorum

Dashboard

Overall score: 0%

1 -

□ Question 8 of 280



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	Chronic inflammatory demyelinating polyneuropathy
	Motor neuron disease (amyotrophic lateral sclerosis)
	Inclusion body myositis
	Ruptured tendon of extensor digitorum

Dashboard

Overall score: 0%

1 -

Question 9 of 280

□ □

A 35 year old lady was referred to the neurology clinic for investigation of facial weakness. Over the past 2 months she noticed that her eyelids had tended to drop towards the end of the day, and she had occasional diplopia. She also felt that the corners of her mouth drooped a bit, and she reported some difficulty smiling. There was no limb weakness, and she had not had any difficulty swallowing.

On examination there was a bilateral facial droop, and bilateral partial ptosis. She was sitting with her head tilted up to compensate for this. She had almost complete ptosis after trying to keep her eyes in elevation for more than 15 seconds. Eye movements were otherwise normal. Palatal movement was equal on both sides, and there were no abnormalities in tongue movements. Tone, power, reflexes and sensation were normal in the upper and lower limbs.

What is the most appropriate initial management?

	Mycophenolate mofetil
	Thymectomy
	Prednisolone
	Intravenous immunoglobulin
	Pyridostigmine

Dashboard

Overall score: 0%

1 -

□ Question 9 of 280



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What is the most appropriate initial management?

	Mycophenolate mofetil
	Thymectomy
	Prednisolone
	Intravenous immunoglobulin
	Pyridostigmine

Dashboard

Overall score: **0%**

1 -

Question 10 of 280

□ □

A 35 year old mechanic attends the emergency department following an injury at work. He has suffered a serious laceration to the upper arm. While suturing, the doctor notices multiple cuts and burns on both arms.

On examination there is marked wasting of brachioradialis and the small muscles in both hands, with mild hyporeflexia of the biceps and brachioradialis tendons. He is weak in both arms, distally more so. His lower limb and cranial nerve examination is unremarkable. On testing upper limb sensation, vibration and proprioception are intact but there appears to be reduced pain and temperature sensation over the C3/C4/C5 dermatomes. What is the most useful investigation?

	Lumbar puncture
	Nerve conduction studies
	MRI Brain
	Electromyography
	MRI cervico-thoracic spine

Dashboard

Overall score: 0%

1 -

□ Question 10 of 280

□ □

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	Lumbar puncture
	Nerve conduction studies
	MRI Brain
	Electromyography
	MRI cervico-thoracic spine

Dashboard

Overall score: **0%****1** -

Question 11 of 280

□ □

A 50-year-old man was transferred to a tertiary referral centre with dense right-sided weakness and a Glasgow Coma Score of 8. It was estimated that the onset of this event was 8 hours prior to being found. He had bilaterally up-going plantar responses. He was haemodynamically stable and not known to have any major co-morbidities.

A CT Scan of his brain revealed a moderate area of established infarct within left middle cerebral artery (MCA) territory with massive cerebral oedema and mid-line shift. In this circumstance, which of the following interventions may benefit the patient in the acute period?

	Decompressive hemicraniectomy
	Intra-arterial clot retrieval
	Intravenous thrombolysis
	Intravenous dexamethasone
	Aspirin through nasogastric tube

Dashboard

Overall score: 0%

1 -

Question 11 of 280

□ □

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Dashboard

Overall score: **0%**

1 -

□ Question 12 of 280



A 33-year-old man who has recently emigrated from Zimbabwe is admitted after being found confused at home. His partner reports that he has been acting strangely for a number of weeks and complaining of altered taste and dizziness. She reports that she is HIV positive but her partner refuses to be tested as he does not believe in 'medical lies'.

On admission he is afebrile with a blood pressure of 114/82mmHg and pulse 78/min.

Rapid HIV testing confirms that he has the infection. His CD4 count is 11 cells/ μ l.

An MRI (T1 C+) shows the following:



Other than starting highly active antiretroviral treatment, what is the most appropriate treatment?

	Amphotericin B
	Surgical resection
	Steroids + methotrexate + whole brain irradiation
	Rifampicin + isoniazid + pyrazinamide + ethambutol + steroids
	Sulfadiazine + pyrimethamine

Dashboard

Overall score: 0%

1 -

□ Question 12 of 280



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Dashboard

Overall score: 0%

1 -

Question 12 of 280

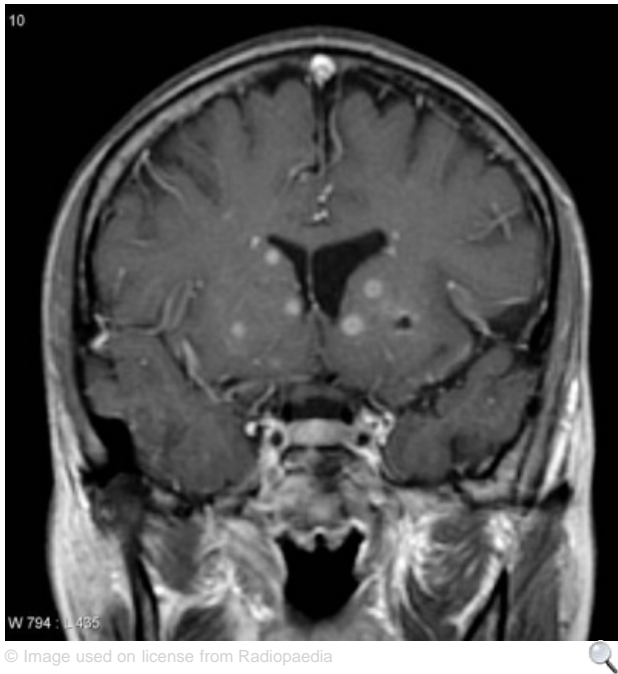


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Overall score: 0%

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Question 12 of 280

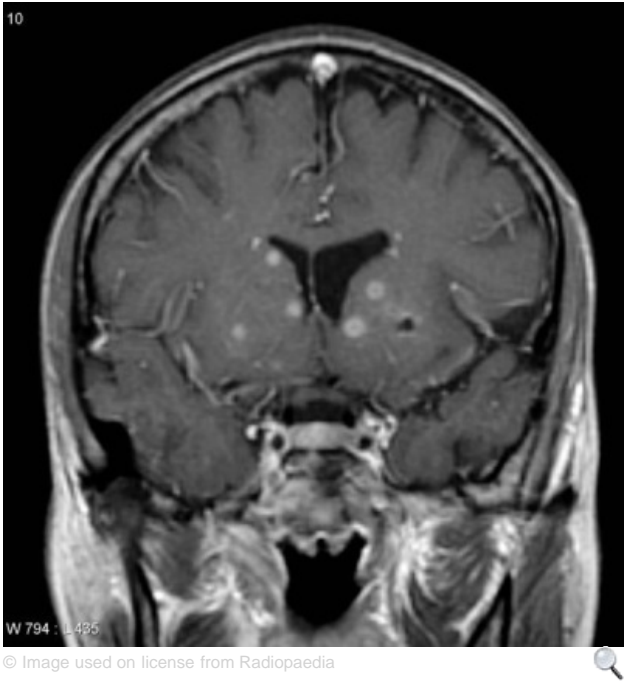
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Overall score: **0%**
1 -



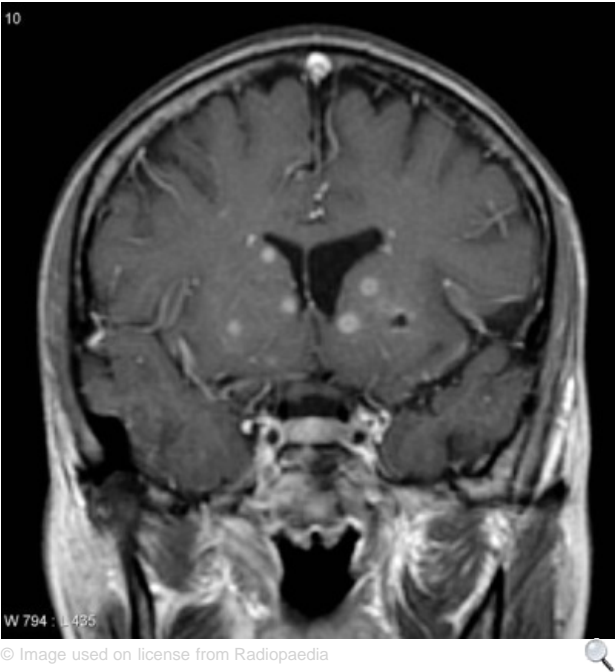
Question 12 of 280

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Overall score: **0%**

1 -



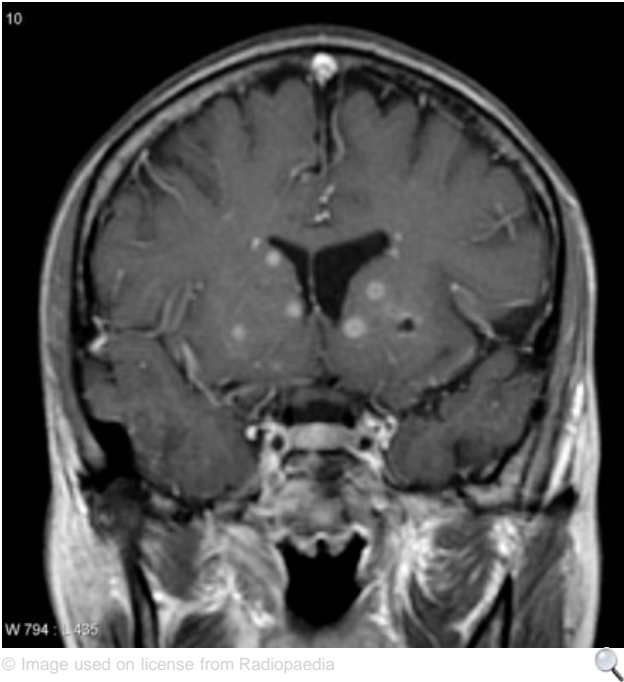
Question 12 of 280

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Overall score: **0%**

1 -



Question 13 of 280

□ □

A 32-year-old male presents with his 4th episode of worst ever headache in one week. He describes the headache to always be of sudden onset on the left side of his head, of 10 out of 10 severity and that he finds bright lights extremely distressing during these periods. The episodes last for around 30 minutes, typically after dinner. He also describes redness and swelling of his left eye and a blocked left nostril during the headaches, associated with tearing of his left eye.

He has no past medical history and family history of migraines. He denies illicit drug use, is a non-smoker and drinks two glasses of wine with dinner every night. Over the past 7 days, he has been self-medicating with paracetamol and ibuprofen. On examination, you notice no focal neurology, no meningism and fundoscopy is unremarkable.

What is the most likely diagnosis?

	Subarachnoid haemorrhage
	First presentations of migraine
	SUNCT (short lasting unilateral neuralgiform headache with conjunctival injection or tearing)
	Medication overuse headache
	Cluster headaches

Dashboard

Overall score: 0%

1 -

Question 13 of 280

□ □

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	Cluster headaches

Dashboard

Overall score: **0%**

1 -

□ Question 14 of 280



A 19 year old male presents to outpatient clinic with a 3 month history of worsening speech slurring. He finds it extremely embarrassing and is made fun of by his friends in college, who thinks he is turning up to school drunk. He is also finding that he is having difficulty with excessive drooling. Over the past 6 weeks, he has also noted increasing weakness in lifting his right arm. He has no other past medical history, is a non-smoker and drinks alcohol only socially.

On examination, his cranial nerves demonstrate weakness in raising his eyebrows, puffing his cheeks and in pursing his lips. He displays significant scapula winging bilaterally with mild wasting of his right deltoid muscle. Musculature of his left arm is normal. Power of his right shoulder abduction and adduction is 3/5, with 5/5 in all other movements. Reflexes are all present with normal sensory examination.

His blood tests are as follows:

Hb	14.4 g/dl	388 * 10 ⁹ /l
Platelets		
WBC	5.8 * 10 ⁹ /l	

Na ⁺	139 mmol/l
K ⁺	4.7 mmol/l
Urea	4.6 mmol/l
Creatinine	55 µmol/l
CRP	2mg/l
Creatine kinase	150 IU/l (50-335)
TSH	2.3 mu/l
Free T4 nmol/l	
HIV	negative

What is the diagnosis?

	Myoclonic epilepsy with ragged red fibres (MERRF)
	Myotonic dystrophy type 1
	Polymyositis
	Limb girdle muscular dystrophy
	Facioscapulohumeral dystrophy

Dashboard

Overall score: **0%**

1 -

□ Question 14 of 280



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Dashboard

Overall score: **0%**

1 -

□ Question 15 of 280

□ □

A 17 year old girl is brought to the Emergency Department following a prolonged seizure lasting seven minutes. She is known to suffer from epilepsy and has been stable on lamotrigine for eight years, having on average only one generalised tonic clonic seizure every eight months. Her mother describes an increase in her seizure frequency over the last four weeks; she has had three generalised tonic-clonic seizures during this period, each lasting around three minutes. There have been no changes to stress levels, sleep pattern or diet. She confirms she has however started a new medication for dysmenorrhoea. Which is the most likely to explain this increase in frequency?

	Medroxyprogesterone (Depo-Provera)
	Mefenamic acid
	Ibuprofen
	Aspirin
	Naproxen

Dashboard

Overall score: 0%

1 -

□ Question 15 of 280

□ □

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	Medroxyprogesterone (Depo-Provera)
	Mefenamic acid
	Ibuprofen
	Aspirin
	Naproxen

Dashboard

Overall score: **0%****1** -

Question 16 of 280

□ □

A 32 year-old man presents to the neurology clinic with burning pains in both feet, which has progressed over the last year.

His past medical history includes hepatitis C, and last year he was commenced on treatment with pegylated interferon and ribavirin.

On examination, power is normal throughout. Reflexes are present normally in the arms but only with reinforcement in the knees, and absent in the ankles. Sensation to pin-prick, joint position, and vibration is absent up to the knees.

Nerve conduction studies show reduction in the amplitude of lower limb sensory action potentials, in a length-dependent fashion. Conduction velocities are relatively preserved. Motor studies are normal.

What is the most likely cause of this mans pain?

	Diabetic small-fibre neuropathy
	Fabrys disease
	Drug-induced peripheral neuropathy
	Cryoglobulinaemic peripheral neuropathy
	Chronic inflammatory demyelinating polyradiculoneuropathy (CIDP)

Dashboard

Overall score: 0%

1 -

Question 16 of 280

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Dashboard

Overall score: **0%**

1 -

Question 17 of 280

□ □

A 65-year-old lady with a history of diabetes and newly diagnosed atrial fibrillation (AF) was admitted to hospital with a moderate-large sized embolic stroke. Her blood pressure on admission was 165/90 mmHg with a heart rate of 95 beats per minute.

An MRI brain was performed 24 hours after admission which showed a moderate to large area of infarction involving the anterior 2/3 of the left middle cerebral artery territory without haemorrhagic transformation.

With regards to management of her AF and stroke prevention, the most appropriate decision would be to commence which of the following?

	An adjusted dose intravenous heparin infusion
	Therapeutic dose low molecular weight heparin (LMWH) and transition to oral anticoagulation in 10-14 days
	Aspirin and wait 10-14 days before commencing formal anticoagulation
	Warfarin with LMWH bridging therapy
	OR calculate the CHADS-vasc score and make a decision

Dashboard

Overall score: 0%

1 -

□ Question 17 of 280

□ □

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	OR calculate the CHADS-vasc score and make a decision

Dashboard

Overall score: **0%**

1 -

Question 18 of 280

□ □

You are called to a general medical ward during the night to review 48 year female who has become acutely agitated and confused. She came into hospital two days ago with a suspected urinary tract infection and has been making uneventful progress. She has a past history of traumatic spinal injury at level C5 three years ago with resulting spastic quadraparesis. On your arrival her blood pressure is 220/105 mmHg, heart rate is 55/min, and she is flushed and diaphoretic.

Of the following, what additional feature might you expect to find?

	Palpable bladder
	Ejection systolic murmur in the pulmonary area
	Flushing of the skin in the trunk and legs
	Relative afferent pupillary defect
	Complete heart block

Dashboard

Overall score: 0%

1 -

Question 18 of 280

□ □

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	Complete heart block

Dashboard

Overall score: **0%**

1 -

Question 19 of 280

□ □

A 44-year-old male presents to your headache clinic with a 6-month history of left-sided daily headaches located in the frontal and retroorbital area. He denies any pain-free periods. The headaches are of moderate 5/10 severity with unpredictable exacerbations of severe pain going up to 9/10 severity. He describes to you what sounds to you like left-sided conjunctival injection and lacrimation often occurring alongside the headaches. Which of the following is most likely to aid you in making a diagnosis?

	a trial of high flow 100% oxygen
	Lumbar puncture
	a trial of indomethacin
	CT brain
	MRI brain

Dashboard

Overall score: 0%

1 -

Question 19 of 280

□ □

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	Lumbar puncture
	a trial of indomethacin
	CT brain
	MRI brain

Dashboard

Overall score: **0%**

1 -

Question 20 of 280

A 73-year-old patient is brought in by ambulance to the emergency department. He has had a sudden onset of right-sided weakness and dysphasia which started five hours ago. He undergoes a CT scan and an ischaemic stroke is confirmed with no evidence of acute bleeding.

Due to the delay in presentation to hospital, he is not thought to be suitable for thrombolysis.

He is started on aspirin and admitted to the stroke ward. He has significantly reduced mobility due to his weakness. He is considered to be at risk of haemorrhagic transformation. How should his risk of venous thromboembolism be managed?

<input type="checkbox"/>	Low molecular weight heparin
<input type="checkbox"/>	Unfractionated heparin
<input type="checkbox"/>	Anti-embolic stockings
<input type="checkbox"/>	Intermittent pneumatic compression
<input type="checkbox"/>	Warfarin

Dashboard

Overall score: 0%

1 -

□ Question 20 of 280

□ □

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	Low molecular weight heparin
	Unfractionated heparin
	Anti-embolic stockings
	Intermittent pneumatic compression
	Warfarin

Dashboard

Overall score: 0%

1 -

□ Question 21 of 280

□ □

A 45 year old woman presents to the Accident and Emergency department after a road traffic accident where she sustains multiple injuries including an open fracture of her left tibia and fibula. The following day she has an open reduction and internal fixation of the left tibia and fibula and remains in hospital for physiotherapy. She is quite immobile during this period and then develops subsequent painful swelling and erythema of the left calf. Subsequent ultrasonography confirms a left sided above knee Deep Vein Thrombosis.

Before treatment starts, she develops sudden onset weakness in her right leg and right arm, dysarthric speech and a reduction in conscious level. Subsequent CT scanning confirms the presence of a left sided infarct in the middle cerebral artery territory. Doppler investigation of the carotids show 20% stenosis on the left side and 10% on the right side. 24hr tape shows average heart rate 52bpm with 1.5s pauses maximum, sinus bradycardia

Which following feature from further investigation would best explain this womans presentation?

	Anti phospholipid antibody positive
	Protein C deficiency
	Patent foramen ovale (PFO)
	Hypercholesterolaemia
	Dilated cardiomyopathy on ECHO

Dashboard

Overall score: 0%

1 -

□ Question 21 of 280

□ □

A 45 year old woman presents to the Accident and Emergency department after a road traffic accident where she sustains multiple injuries including an open fracture of her left tibia and fibula. The following day she has an open reduction and internal fixation of the left tibia and fibula and remains in hospital for physiotherapy. She is quite immobile during this period and then develops subsequent painful swelling and erythema of the left calf. Subsequent ultrasonography confirms a left sided above knee Deep Vein Thrombosis.

Before treatment starts, she develops sudden onset weakness in her right leg and right arm, dysarthric speech and a reduction in conscious level. Subsequent CT scanning confirms the presence of a left sided infarct in the middle cerebral artery territory. Doppler investigation of the carotids show 20% stenosis on the left side and 10% on the right side. 24hr tape shows average heart rate 52bpm with 1.5s pauses maximum, sinus bradycardia

Which following feature from further investigation would best explain this womans presentation?

	Anti phospholipid antibody positive
	Protein C deficiency
	Patent foramen ovale (PFO)
	Hypercholesterolaemia
	Dilated cardiomyopathy on ECHO

Dashboard

Overall score: **0%****1** -

Question 22 of 280

□ □

A 40 year-old man presents to the general medical clinic with a one year history of generalised weakness. He mentions his father suffered from the same symptoms, although from a later age.

His past medical history includes type two diabetes mellitus (diet controlled) and eczema.

On examination he has male pattern balding and an expressionless face. You note a diminished left red reflex, with a normal cranial nerve examination. He has symmetrically reduced reflexes throughout, with mild reduced power distally in both upper and lower limbs.

Hb	140 g/l
Platelets	$200 \times 10^9/l$
WBC	$8 \times 10^9/l$
CK	70IU/L (reference range 60- 174 IU/L)

What is the most likely diagnosis?

	Hyperthyroidism
	Inclusion body myositis
	Cushing's disease
	Becker's muscular dystrophy
	Myotonic dystrophy

Overall score: **0%**

1 -

Question 22 of 280

□ □

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What is the most likely diagnosis?

	Hyperthyroidism
	Inclusion body myositis
	Cushing's disease
	Becker's muscular dystrophy
	Myotonic dystrophy

Dashboard

Overall score: **0%**

1 -

□ Question 23 of 280

□ □

A 28-year-old female presents to the emergency department with a severe headache and lethargy. The headache came on fairly quickly whilst she was watching television. She is otherwise fit and well, has no medical problems and takes no regular medications. She lives at home with her husband and two-year-old daughter. Whilst in the emergency department she is given two co-codamol for her persisting headache but then vomits. On examination, there is no focal neurology but she is slightly drowsy and her GCS is 14/15.

Hb	126 g/l
Platelets	$274 \times 10^9/l$
WBC	$10.9 \times 10^9/l$
Na ⁺	124 mmol/l
K ⁺	5.0 mmol/l
Urea	4.1 mmol/l
Creatinine	124 μ mol/l

What is the most likely diagnosis?

	Tension headache
	Addison's disease
	Pituitary apoplexy
	Sub-arachnoid haemorrhage
	Cranial diabetes insipidus

Overall score: **0%**

1 -

Question 23 of 280

□ □

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	Tension headache
	Addison's disease
	Pituitary apoplexy
	Sub-arachnoid haemorrhage
	Cranial diabetes insipidus

Overall score: **0%**

1 -

Question 24 of 280



A 24-year-old female is reporting difficulty in walking in an inpatient rehabilitation unit during recovery from spinal surgery. Six weeks previously, she underwent emergency spinal haematoma evacuation surgery under the neurosurgeons from T2 to T4 after sustaining a fall playing netball. She was previously fit and well, with no past medical history, giving birth to a healthy baby boy 18 months ago.

On examination, the patient has normal tone in her upper and lower limbs. Examination of her power while lying on her bed demonstrates 5/5 on the MRC power scale with normal sensation to cotton wool, pin prick and proprioception. Reflexes were present (2+) in her biceps, triceps, supinator, patella and ankles, both plantars were downgoing. On walking, the patient's gait is markedly abnormal, with both feet sliding along the floor for 80 metres of walking without lifting of her feet between steps. Cognition is intact. What is the optimal management?

	Repeat MRI head
	Repeat MRI whole spine
	Nerve conduction studies and electromyography
	Lumbar puncture
	Education and reassurance

Dashboard

Overall score: 0%

1 -

Question 24 of 280



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	Repeat MRI head
	Repeat MRI whole spine
	Nerve conduction studies and electromyography
	Lumbar puncture
	Education and reassurance

Dashboard

Overall score: 0%

1 -

Question 25 of 280

□ □

A 76-year-old right-handed female presents with sudden onset flaccid right upper and lower paralysis with complete dysphasia. Her daughter reports her to have been well two hours ago.

On examination, the patients score 0/5 on her right upper and lower limb, at least 4/5 on both left limbs (examination was difficult due to her dysphasia), with a loud carotid bruit. She is also now in atrial fibrillation, a new diagnosis for her. She is well known to the stroke team: 6 weeks ago, she was admitted with a right middle cerebral artery ischaemic stroke, leaving her with minimal residual weakness on her discharge.

During her admission, she was found to have 85% carotid stenosis in her right internal carotid artery and 75% in her left internal carotid artery, for which she declined surgery. Her other past medical history includes hypertension, type 2 diabetes mellitus and dyslipidaemia. She does not take any anticoagulants. A CT head demonstrates a hypodensity in the left middle cerebral artery area distribution, consistent with an acute ischaemic stroke with no areas of haemorrhagic transformation.

What is the most appropriate next course of action?

	Intravenous alteplase
	Clopidogrel 75mg
	Aspirin 300mg
	Treatment dose low molecular weight heparin
	Warfarin

Dashboard

Overall score: 0%

1 -

Question 25 of 280

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	Warfarin

Dashboard

Overall score: **0%**

1 -

Question 26 of 280

□ □

A 28 year-old woman presents with a two month history of double vision, which is worse at the end of each day. On examination, there is bilateral ptosis which is fatiguable. There is a complex ophthalmoplegia which does not conform to the pattern of one or more cranial nerves. Examination of the limbs is unremarkable.

Which of the following would be most suggestive of a diagnosis of myasthenia gravis?

	Weakness confined to extraocular muscles
	A decremental response to repetitive nerve stimulation
	An incremental response to repetitive nerve stimulation
	Thymic enlargement seen on chest imaging
	Internuclear ophthalmoplegia

Dashboard

Overall score: 0%

1 -

Question 26 of 280

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	Thymic enlargement seen on chest imaging
	Internuclear ophthalmoplegia

Dashboard

Overall score: **0%**

1 -

Question 27 of 280



A 80 year old woman is referred to neurology clinic after experiencing increasing diplopia, typically worsening during the course of the day. The patient reported no speech or swallowing problems and no limb weakness.

Past medical history included chronic obstructive pulmonary disease and ischaemic heart disease. The patient was able to mobilise around her flat with a frame but was required to use a wheelchair outside the home due to exertional breathlessness. Regular medications were inhaled salbutamol and tiotropium, aspirin, simvastatin, bisoprolol and ramipril. The patient lived with her husband and had once daily carers to assist with activities of daily living.

Examination in clinic was significant for the development of ptosis on prolonged upwards gaze. There was no significant weakness of facial muscles, palate or tongue. There was no evidence of fatiguable weakness in the arms or legs.

A summary of the patients investigations is given below.

Serum acetylcholine receptor antibodies	negative
Serum muscle specific tyrosine kinase	positive

Neurophysiology: no evidence of repetitive nerve stimulation

CT thorax: retro-sternal soft-tissue density mass equal in attenuation to muscle; mass demonstrates heterogeneous enhancement following contrast injection

What is the appropriate management of the retro-sternal mass?

<input type="checkbox"/>	Proceed to thymectomy
<input type="checkbox"/>	Proceed to thymectomy if patient does not respond to first line treatment
<input type="checkbox"/>	Surgical biopsy
<input type="checkbox"/>	No action required
<input type="checkbox"/>	Trans-bronchial biopsy

Dashboard

Overall score: **0%**

1 -

Question 27 of 280



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	Proceed to thymectomy if patient does not respond to first line treatment
	Surgical biopsy
	No action required
	Trans-bronchial biopsy

Dashboard

Overall score: **0%**

1 -

Question 28 of 280



A 32 year old man presents to your haematology clinic with a 4 year history of fatigue, weight loss and a feeling of fullness in the stomach. He has been off sick from work for the past 3 months and has recently been divorced. He also complains of low mood and has attempted suicide in the past. He has a family history of NHL. He has been investigated in the past with CT scans, blood films and lymph node biopsies on several occasions with the most recent set of investigations occurring 6 months ago.

Despite your reassurances that he does not have a lymphoma, he is still convinced that he does and that he is dying. You suggest a referral to a psychiatrist and he becomes very angry. What is the most likely underlying diagnosis?

	Atypical depression
	Specific phobia
	Hypochondriasis
	Conversion disorder
	Somatoform disorder

Dashboard

Overall score: 0%

1 -

Question 28 of 280

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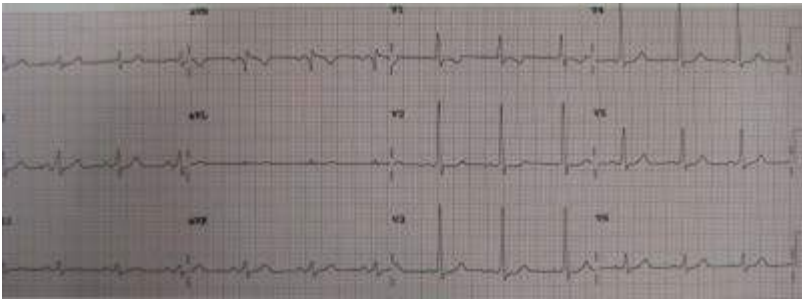
Dashboard

Overall score: **0%**

1 -

Question 29 of 280

A 14-year-old boy presents his third generalised seizure over the past 72 hours, despite recently being started on sodium valproate by a neurologist for recurrent seizures 6 weeks ago, with worsening vision at night and hearing loss bilaterally. The patient has a number of myoclonic jerks as you arrive. On examination, his heart sounds are unremarkable but you notice a tachycardia at 140 and regular. The ECG is shown below:



© Image used on license from Dr Smith, University of Minnesota



The patient is uncooperative to further neurological examination but you notice sluggishly reactive pupils of equal size. His mother reports that he has been educated in a special needs school for the past 5 years but had been attending the local primary school until aged 9, when he dropped further behind than his peers. Which investigation produces the underlying diagnosis?

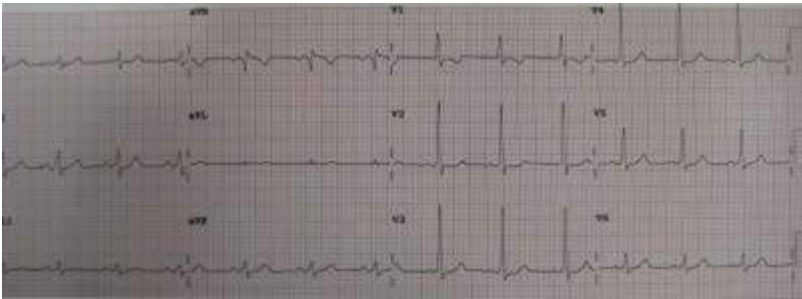
	MRI
	Lumbar puncture
	Electroencephalogram (EEG)
	Cardiac electrophysiology studies
	Muscle biopsy

Overall score: **0%**

1 -

Question 29 of 280

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	MRI
	Lumbar puncture
	Electroencephalogram (EEG)
	Cardiac electrophysiology studies
	Muscle biopsy

Overall score: **0%**

1 -

Question 30 of 280

□ □

A 75-year-old man is being reviewed after transient expressive dysphasia and clumsiness in the right hand. His symptoms completely resolved after 20 minutes.

He does not have a background diagnosis of ischaemic heart disease or diabetes but is an ex-smoker with a 50 pack year history. His blood pressure was 160/70 mmHg and he was in sinus rhythm. He had no detectable neurological signs on examination.

His MRI brain scan showed a very small area of restricted diffusion in the left frontotemporal region consistent with ischaemia.

He has a total fasting cholesterol of 4 mmol/L (normal) with an LDL level of 2.5 mmol/L (normal). With regards to cholesterol, in addition to dietary advice and exercise what else may benefit this patient?

	Commence on a fibrate
	Commence a statin
	Commence a fibrate and a statin
	Commence fish oil tablets
	Assess for diabetes and only if present commence a statin

Dashboard

Overall score: 0%

1 -

Question 30 of 280

□ □

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	Commence on a fibrate
	Commence a statin
	Commence a fibrate and a statin
	Commence fish oil tablets
	Assess for diabetes and only if present commence a statin

Dashboard

Overall score: **0%**

1 -

Question 31 of 280

□ □

A 30 year-old HIV positive South African woman presents to the emergency department with a 12 day history of fever and headache. On examination she is found to have a 6th nerve palsy, papilloedema and erythematous skin papules across her torso. She is not on any medication.

Investigations:

CD4 count	90 cells / mm ³
-----------	----------------------------

CT head: Normal

What is the most appropriate immediate management?

	Intravenous ceftriaxone
	Anti-retroviral therapy
	Rifampicin, isoniazid, pyrazinamide & ethambutol
	Intravenous albendazole & hydrocortisone
	Intravenous amphotericin B & flucytosine

Dashboard

Overall score: 0%

1 -

Question 31 of 280

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1 -

Question 31 of 280



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Dashboard
Overall score: 0% 1 -



□ Question 31 of 280

□ □

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Dashboard

Overall score: **0%**

1 -

10



□ Question 31 of 280

□ □

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Dashboard

Overall score: 0%

1 -



Question 31 of 280

□ □

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Dashboard

Overall score: 0%

1 -

17



W 1942 : L 971

□ Question 32 of 280



A 56-year-old female was admitted to the Emergency Department with a 90-minute history of new onset weakness in her left arm and leg. She stated that she was out shopping when the weakness suddenly came on. Since the onset of the weakness she has noticed some regained strength but still felt definite weakness. She had a past medical history comprising new atrial fibrillation for which she was undergoing investigation, hypertension, hypercholesterolaemia and asthma. She also had a perforated gastric ulcer 16 years ago. She was prescribed amlodipine 5mg OD, bisoprolol 2.5mg OD, atorvastatin 20mg OD, Clenil modulite 200mcg BD and aspirin 75mg OD. She declined formal anticoagulation regarding her atrial fibrillation. When questioned specifically, she denied the presence of any visual loss, headache, vomiting, loss of consciousness or cardiac symptoms. She smoked 20 cigarettes per day and did not consume alcohol.

On examination she was alert and walking with a hemiplegic gait. Her blood pressure was 168/74 mmHg, heart rate 78bpm, respiratory rate of 18/min, temperature of 37.2 C and oxygen saturations of 99% on air. Other than an irregularly irregular pulse, examination of the cardiovascular, respiratory and gastrointestinal systems were unremarkable.

Examination of the central neurological system revealed normal cranial nerves 2-12, with equal and reactive pupils, normal fundoscopy and a GCS of 15. Examination of the peripheral nervous system revealed the presence of power 3/5 in all muscles of the left upper and lower limbs, with decreased tone and absent deep reflexes. Power was otherwise 5/5 in all other muscle groups, with downgoing plantar reflexes. Sensation and coordination testing was unremarkable.

Initial investigations revealed the following results:

Hb	179 g/l
MCV	99 fl
Platelets	452 * 10 ⁹ /l
WBC	12.2 * 10 ⁹ /l

ECG: atrial fibrillation 74 bpm no acute changes

CT head scan: no evidence of intracranial haemorrhage, mass shift or space occupying lesions

What is the next best management step?

Commence intravenous heparin

	Commence thrombolysis therapy
	Arrange urgent haematology consult
	Commence aspirin 300mg and admit to stroke unit
	Commence immediate amlodipine 5mg OD

Dashboard

Overall score: 0%

1 -

Question 32 of 280



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	Commence immediate amlodipine 5mg OD

Dashboard

Overall score: **0%**
1 -

□ Question 33 of 280

□ □

A 74-year-old female has been admitted to the stroke unit following a significant right middle cerebral artery infarct. A dense left side sensori-motor syndrome and significantly impaired swallowing mechanisms were noted. Nursing staff insert a nasogastric (NG) tube after the patient failed her swallow screen and NG feed is immediately started. Around 72 hours after the feed was commenced, her blood sugar was noted to be 16 mmol/l, with no serum or urinary ketones. Her only past medical history was paroxysmal atrial fibrillation and no known diagnosis of diabetes mellitus. She took aspirin 75mg only prior to admission. What is the optimal management of her hyperglycaemia?

	Prescribe 6 units actrapid as required when BM > 10 mmol/l
	Stop the NG feed
	Prescribe biphasic insulin twice daily
	Prescribe warfarin as per loading regime
	Repeat the BM in 4 hours time, no action at present

Dashboard

Overall score: 0%

1 -

Question 33 of 280

□ □

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Dashboard

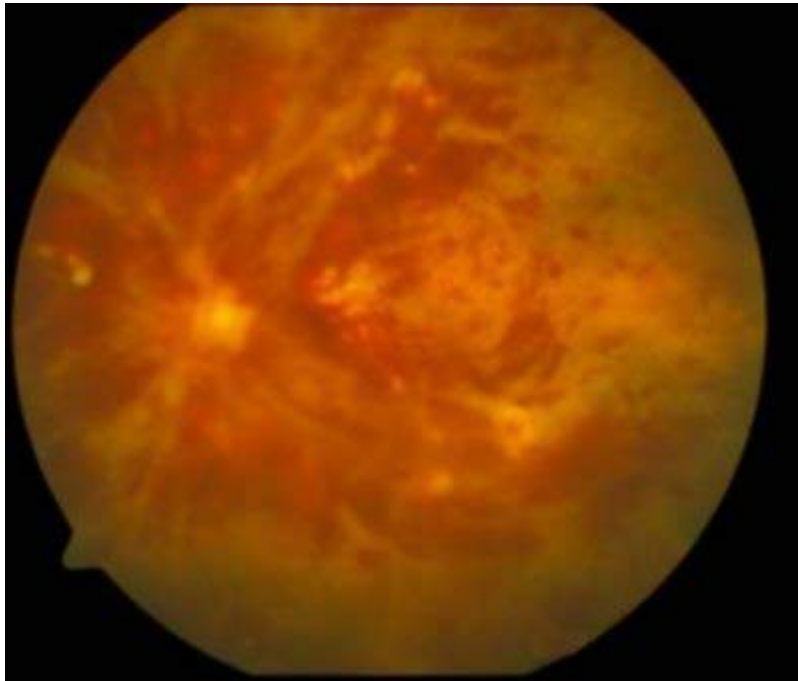
Overall score: **0%**

1 -

□ Question 34 of 280

□ □

A 62-year-old woman presents with sudden loss of vision in her left eye. Fundoscopy reveals the following:



What is the diagnosis?

<input type="checkbox"/>	Retinal detachment
<input type="checkbox"/>	Ischaemic optic neuropathy
<input type="checkbox"/>	Vitreous haemorrhage
<input type="checkbox"/>	Central retinal vein occlusion
<input type="checkbox"/>	Central retinal artery occlusion

Dashboard

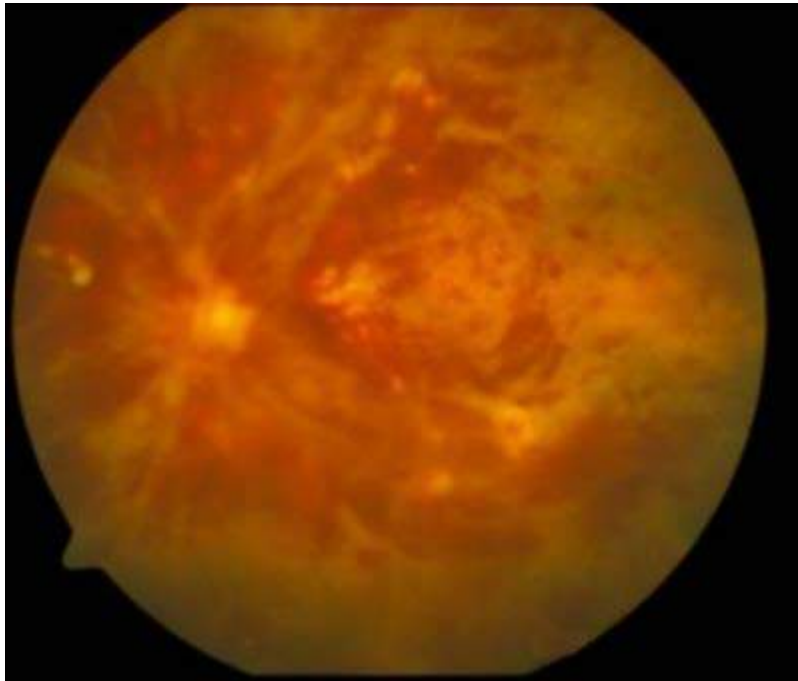
Overall score: **0%**

1 -

□ Question 34 of 280

□ □

A 62-year-old woman presents with sudden loss of vision in her left eye. Fundoscopy reveals the following:



What is the diagnosis?

	Retinal detachment
	Ischaemic optic neuropathy
	Vitreous haemorrhage
	Central retinal vein occlusion
	Central retinal artery occlusion

Dashboard

Overall score: **0%**

1 -

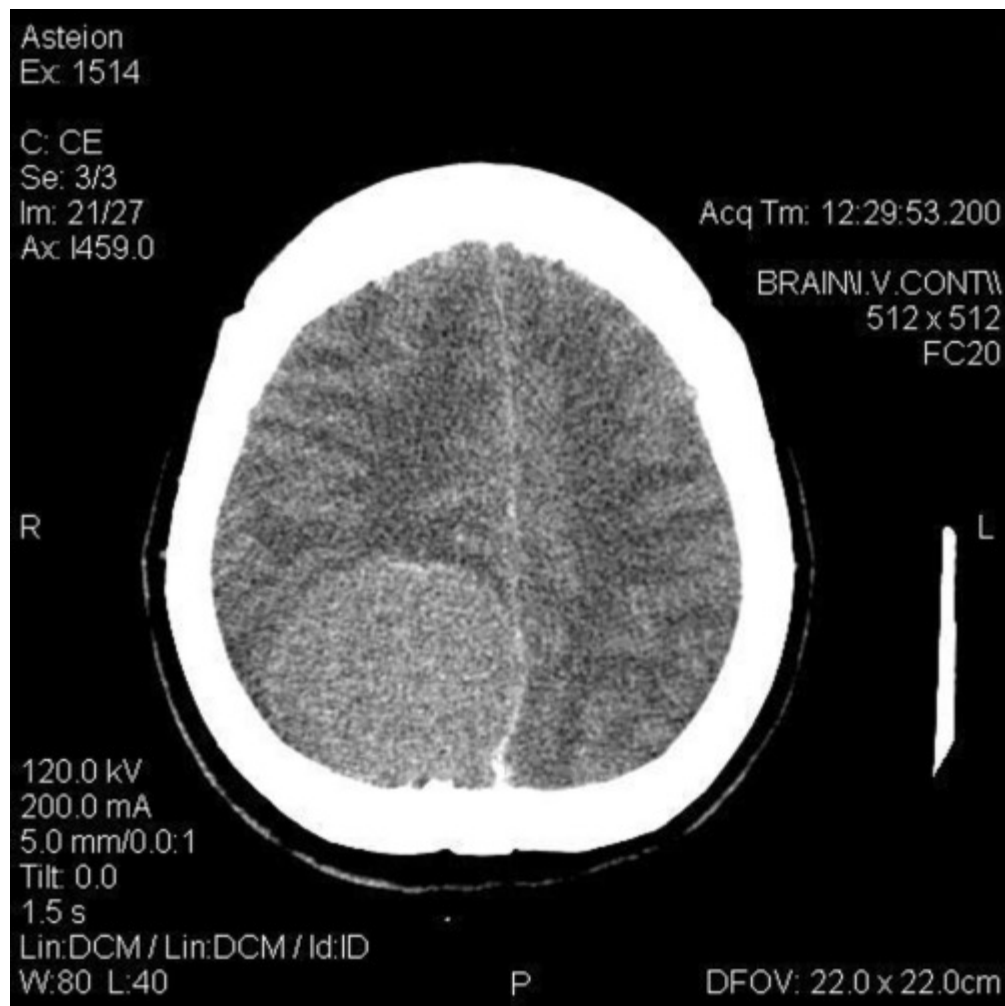
□ Question 35 of 280

□ □

A 45-year-old woman presents to the Emergency Department due to a headache. This has been getting gradually worse over the past 3 months. Her GP has tried a number of therapies including a triptan, amitriptyline and standard analgesia with limited effect. She is a non-smoker and drinks around 30 units of alcohol per week.

Neurological examination is unremarkable.

A CT scan is arranged:



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What is the most likely diagnosis?

	Extradural haematoma
	Meningioma
	Glioblastoma multiforme
	Herpes simplex encephalitis
	Subdural haematoma

Dashboard

Overall score: 0%

1 -

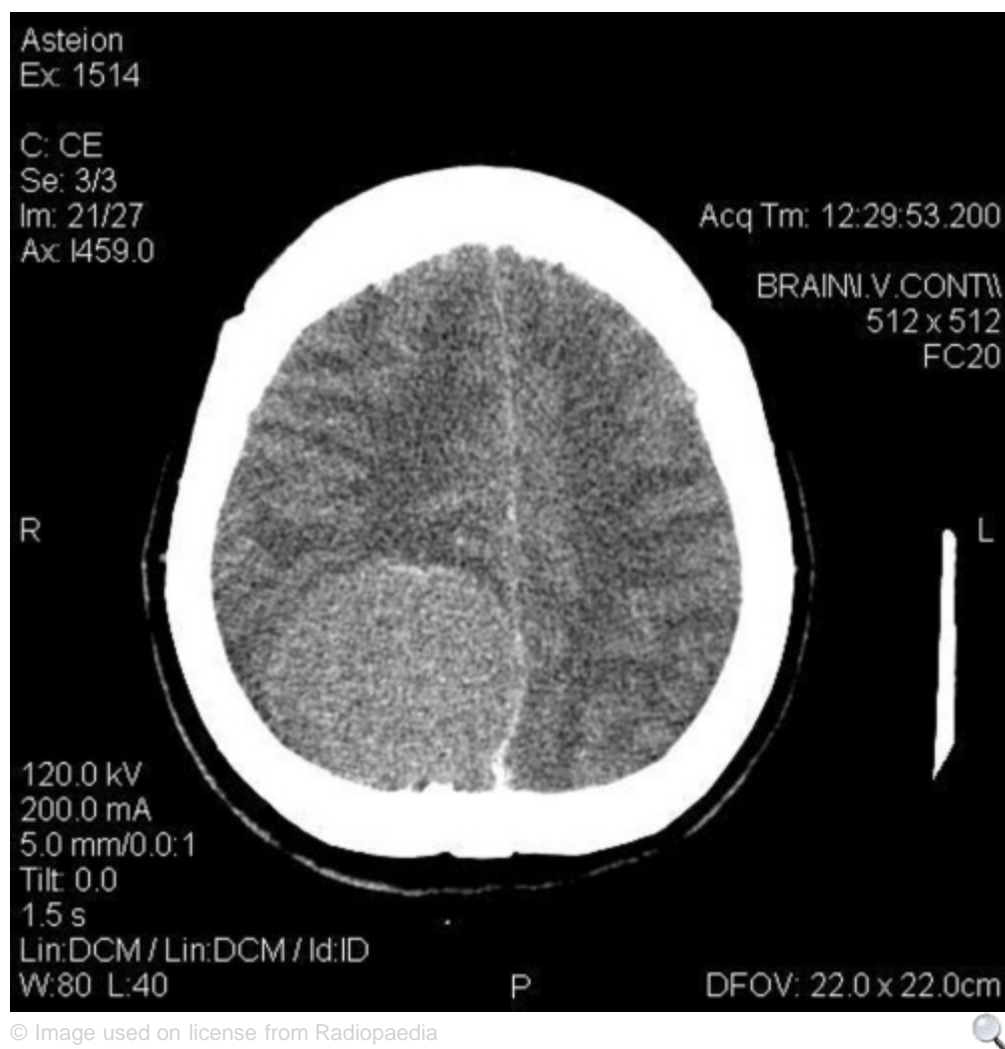
□ Question 35 of 280

□ □

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Neurological examination is unremarkable.

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	Herpes simplex encephalitis
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Dashboard

Overall score: 0%

1 -

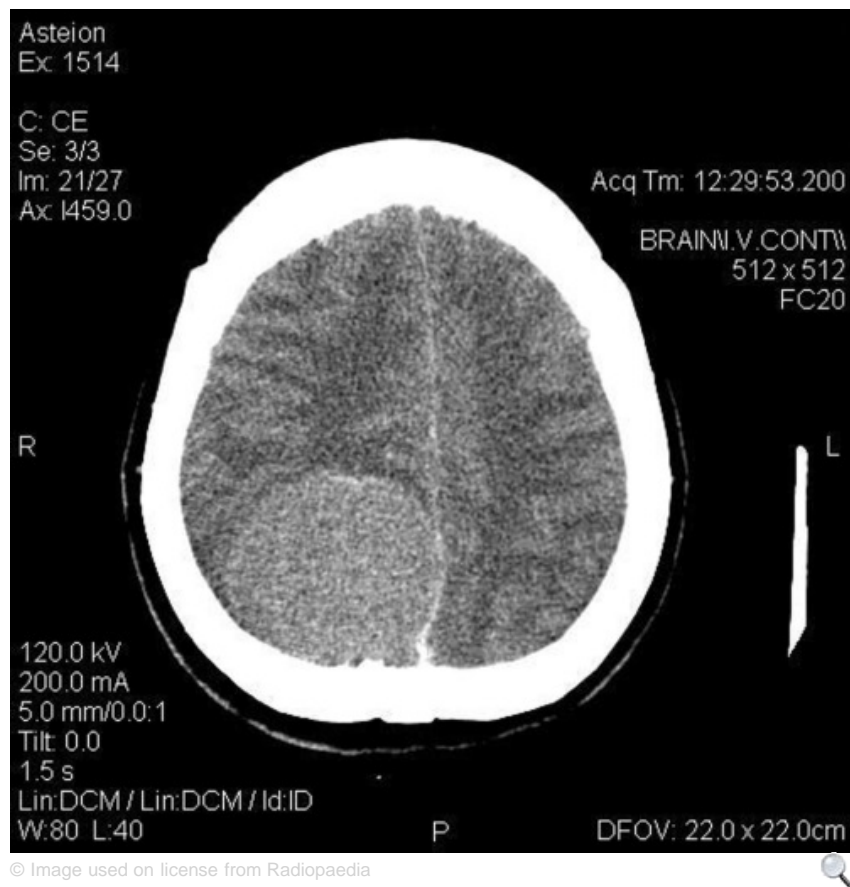
Question 35 of 280



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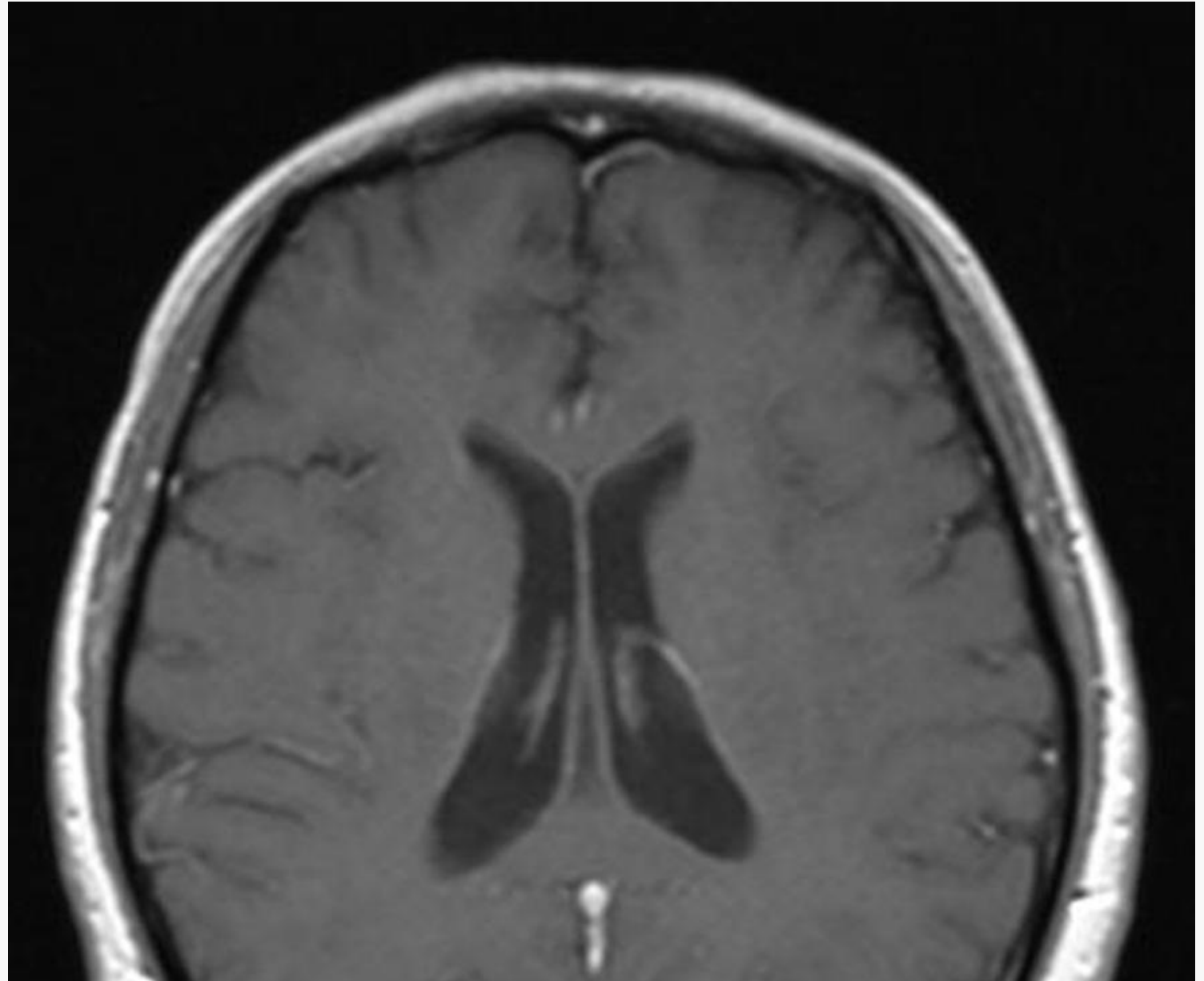
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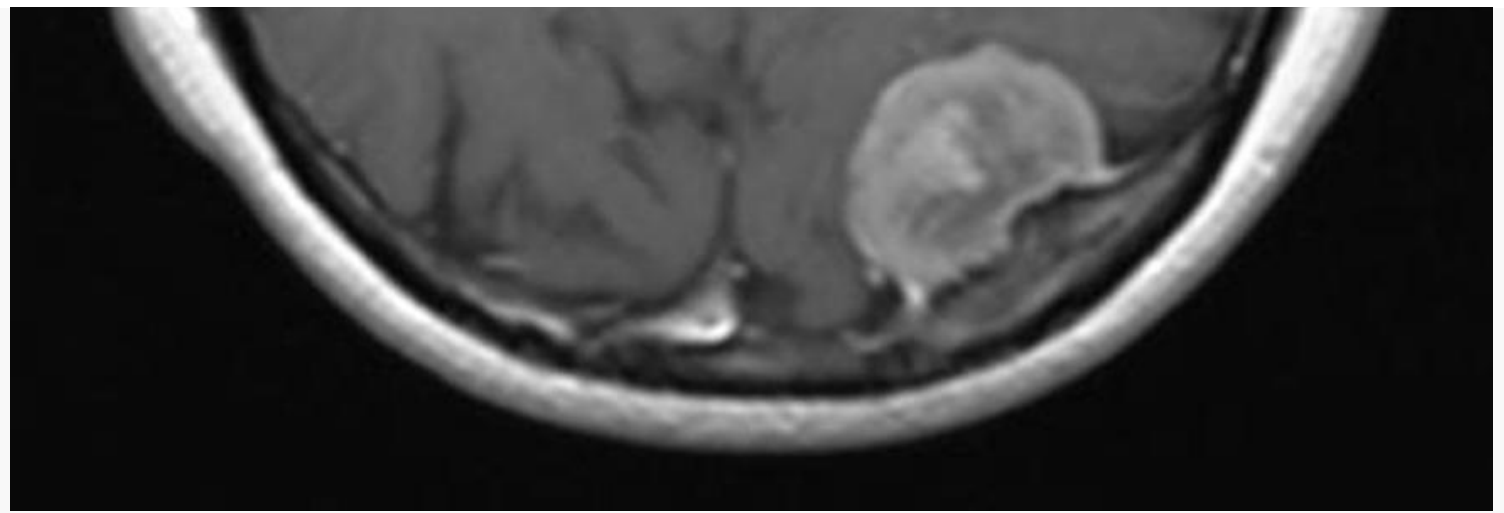
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	Meningioma
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	Subdural haematoma

Dashboard

Overall score: 0%

1 -





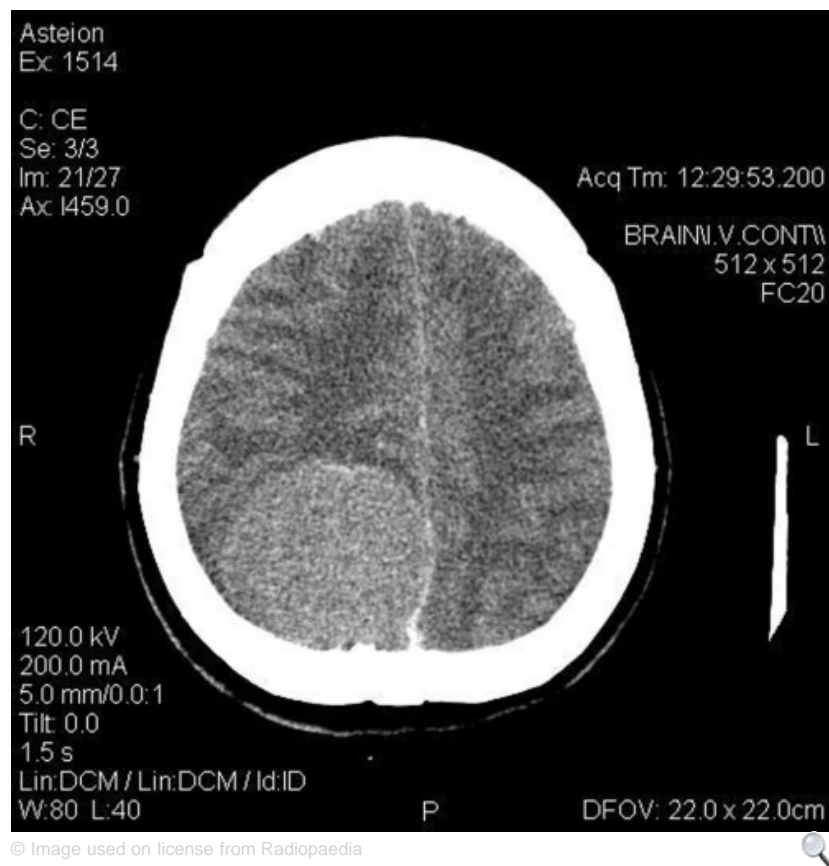
Question 35 of 280

A 45-year-old woman presents to the Emergency Department due to a headache. This has been getting gradually worse over the past 3 months. Her GP has tried a number of therapies including a triptan, amitriptyline and standard analgesia with limited effect. She is a non-smoker and drinks around 30 units of alcohol per week.

Neurological examination is unremarkable.

A CT scan is arranged:



What is the most likely diagnosis?

	Extradural haematoma
	Meningioma
	Glioblastoma multiforme
	Herpes simplex encephalitis
	Subdural haematoma

Dashboard

Overall score: 0%

1 -



□ Question 36 of 280

□ □

An 82-year-old female is brought into your falls clinic by her daughter after her third fall this year. No fractures were sustained and she appears to have no significant head injuries. The fall appears mechanical in nature. She currently lives with her daughter, who reports the patient's mobility to be progressively deteriorating, from full independence and no exercise limitations 1 year ago to restrictions at 50-70 yards now, limited by knee pain secondary to osteoarthritis. Her other past medical history includes hypertension, type 2 diabetes mellitus, chronic kidney disease and previous gallstones.

You note she is withdrawn and makes little eye contact. Her voice is quiet. When you ask her whether she is low in mood, she does not respond. She reports no suicidal ideations but has little hope for the future. She asks you to 'not worry about it', as she 'has been the same way for several months now'. However, the patient does seem amenable to some kind of treatment.

On the Beck depression scale, she scores 11/63 (0-13 = no or minimal depression), on the geriatric depression scale, she scores 11/15 (greater than 10 = indicative of depression) and mini-mental state examination, she scores 19/30 (20-26 = mild cognitive impairment, 10-19 = moderate cognitive impairment). Routine investigations including B12, folate, thyroid function, liver function tests and bone profile are unremarkable.

What is the most appropriate treatment pathway?

	Citalopram
	Amitriptyline
	Mirtazapine
	Donepezil
	No treatment required

Overall score: **0%**

1 -

□ Question 36 of 280

□ □

An 82-year-old female is brought into your falls clinic by her daughter after her third fall this year. No fractures were sustained and she appears to have no significant head injuries. The fall appears mechanical in nature. She currently lives with her daughter, who reports the patient's mobility to be progressively deteriorating, from full independence and no exercise limitations 1 year ago to restrictions at 50-70 yards now, limited by knee pain secondary to osteoarthritis. Her other past medical history includes hypertension, type 2 diabetes mellitus, chronic kidney disease and previous gallstones.

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What is the most appropriate treatment pathway?

	Citalopram
	Amitriptyline
	Mirtazapine
	Donepezil
	No treatment required

Overall score: **0%**

1 -

Question 37 of 280



A 23 year old female has re-presented 2 days after discharge from the neurology team with a constant diffuse headache, worse on standing than lying down, without neck stiffness or photophobia, but associated with nausea and vomiting. 48 hours ago, she was an inpatient being investigated for intermittent headaches over the past 8 months, typically over the left side of her frontal and temporal regions, of sudden onset during any time of day, associated with double vision, lasting for 'hours' at a time. She was experiencing up to 5 episodes a week, with one episode witnessed during her admission, when the senior house officer noted bilateral restriction in vertical eye movements, adduction and unreactive pupils, spontaneously resolving after 3 hours. Her blood tests were unremarkable.

The patient underwent a CT head, demonstrating no intracranial lesions; and a lumbar puncture:

Opening pressure	12.3 cmH ₂ O
WCC	2 /mm ³
RBC	50 /mm ³
Protein	0.45 g/l
Glucose	4.5 mmol/l (serum 6.7 mmol/l)
Oligoclonal bands	None present

The patient subsequently self-discharged, reporting no immediate headaches, back pain or lower limb paraesthesiae after the lumbar puncture.

During this second admission, she undergoes a MRI head scan, demonstrating significant diffuse meningeal enhancement and bilateral shallow subdural haemorrhages. What is the appropriate treatment?

	Oral fluids, caffeine and blood patch
	Repeat lumbar puncture
	Intravenous aciclovir

	Intravenous ceftriaxone
	Neurosurgical input

Dashboard

Overall score: **0%**

1 -

Question 37 of 280



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Dashboard

Overall score: **0%**
1 -

Question 38 of 280



A 32-year-old woman presents with reduced sensation. She has noticed that slowly over six months she has not felt when hot water has splashed on her hands, despite blistering occurring afterwards. Her husband has become concerned and asked her to seek a medical opinion. She denies any other problems, including weakness, weight-loss or her activities of daily living being affected. She has a past medical history of asthma but only rarely needs her salbutamol inhaler. She has no other medications or allergies. On examination, she has sensory loss over her hands and arms when tested for temperature and pain. There is a dermatomal distribution affecting dermatomes C4 to C6 which is symmetrical. Cranial nerve and lower limb examination is normal. Spinal examination shows no tenderness. What is the most likely diagnosis?

	Multiple sclerosis
	Cervical disc prolapse
	Vasculitis
	Myasthenia gravis
	Syringomyelia

Dashboard

Overall score: 0%

1 -

□ Question 38 of 280

□ □

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	Multiple sclerosis
	Cervical disc prolapse
	Vasculitis
	Myasthenia gravis
	Syringomyelia

Dashboard

Overall score: **0%****1** -

Question 39 of 280

A 61-year-old male presenting with his 6th episode of binocular visual loss, which he describes as 'lights' and 'white dots' over the past 14 months. He denies any limb or facial weakness or sensory loss. He denies having a headache. He is an active smoker, with a 60 pack year smoking history and has known hypertension on ramipril 5mg OD. Your neurological exam is unremarkable; CT head demonstrates no acute infarct or haemorrhage. MRI head is unremarkable. What is the most likely diagnosis?

<input type="checkbox"/>	Posterior circulation transient ischaemic attacks (TIAs)
<input type="checkbox"/>	Posterior circulation strokes
<input type="checkbox"/>	Acephalgic migraine
<input type="checkbox"/>	Multiple sclerosis
<input type="checkbox"/>	Occipital space occupying lesion

Dashboard

Overall score: **0%**

1 -

Question 39 of 280



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	Posterior circulation strokes
	Acephalgic migraine
	Multiple sclerosis
	Occipital space occupying lesion

Dashboard

Overall score: **0%**

1 -

Question 40 of 280

□ □

A 67-year-old male presents to the hospital with 2 hours of acute onset right sided weakness and speech difficulties.

A CT cerebral angiogram shows proximal left middle cerebral artery (LMCA) thrombosis.

Seven days prior to this presentation he underwent a laparotomy for bowel obstruction secondary to an incarcerated umbilical hernia. In the absence of IV thrombolysis which of the following emergency therapies may benefit the patient?

	Intra-arterial clot retrieval
	Prasugrel
	Mannitol
	Intravenous heparin infusion
	Rosuvastatin

Dashboard

Overall score: 0%

1 -

Question 40 of 280

□ □

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	Prasugrel
	Mannitol
	Intravenous heparin infusion
	Rosuvastatin

Dashboard

Overall score: **0%**

1 -

□ Question 41 of 280

□ □

An 18-year-old lady works as a nursery teaching assistant and has noticed her right arm always shakes as she stretches it out to write on the blackboard at school. She has also started dropping cups of tea because of shaking on picking them up. Her balance has become poor and she now falls over easily when playing hopscotch with the children. These problems have developed over 14 months slowly. Her neurological examination reveals a postural tremor of the upper limbs; right worse than left, as well as a broad-based ataxic gait. She has some co-existent rigidity of the right upper limb. Slit lamp examination reveals brown-green deposits in Descemet's membrane of the cornea. The remainder of the clinical examination is unremarkable. What is the most appropriate treatment for the underlying condition?

	Dimercaprol
	Levodopa
	Beta-interferon
	D-penicillamine
	Calcium EDTA

Dashboard

Overall score: 0%

1 -

□ Question 41 of 280

□ □

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	Dimercaprol
	Levodopa
	Beta-interferon
	D-penicillamine
	Calcium EDTA

Dashboard

Overall score: **0%****1** -

Question 42 of 280



A 55-year-old female presents with 3 weeks of bilateral tingling sensation in her medial one and half digits at night. She has noted a clawing of her 4th and 5th digits and she is particularly concerned by the cosmetic elements. She also complains of a left sided foot drop present over the past 8 months. Her past medical history includes type 2 diabetes mellitus, for which she take metformin 850mg TDS and she admits to occasional poor compliance. Her last HbA1c was 7 mmol/l. She has also had multiple admissions for surgery to her feet at childhood but she is unaware of further details. She was adopted and is unaware of her birth family history. On examination, she clinically has a left common peroneal palsy with bilateral thin calves, and loss of sensation in bilateral ulnar nerve territories. What is the unifying diagnosis for her presenting paraesthesia and foot drop?

	Hereditary neuropathy with liability to pressure palsies
	Diabetic neuropathy
	Chronic inflammation demyelinating polyneuropathy (CIDP)
	Systemic lupus erythematosus (SLE)
	Sarcoidosis

Dashboard

Overall score: 0%

1 -

□ Question 42 of 280

□ □

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	Chronic inflammation demyelinating polyneuropathy (CIDP)
	Systemic lupus erythematosus (SLE)
	Sarcoidosis

Dashboard

Overall score: 0%

1 -

Question 43 of 280



A 35-year-old lady with no significant past medical history presents to you with lethargy and fatigue over several years, often finding she does not sleep well at night. She complains of a sensation of discomfort in her lower extremities at rest, particularly worse when she is trying to fall asleep. She also describes an abnormal crawling and itching sensation below the knees and often walking will relieve her symptoms. There is no history of pain or night time snoring. Clinical examination and routine blood investigations are unremarkable. She tells you that over the years her general practitioner has ordered several tests on her that have all been normal, including brain imaging, thyroid function, and monitoring of her haemoglobin levels. She is not on any medications. She is now struggling to do her job as a teacher and is now working only part time because of the symptoms. Considering the likely underlying diagnosis, which of the following would you use to try and alleviate her symptoms?

	Lithium
	Quinine
	Pramipexole
	Amitriptyline
	Acetazolamide

Dashboard

Overall score: 0%

1 -

Question 43 of 280



A 35-year-old lady with no significant past medical history presents to you with lethargy and fatigue over several years, often finding she does not sleep well at night. She complains of a sensation of discomfort in her lower extremities at rest, particularly worse when she is trying to fall asleep. She also describes an abnormal crawling and itching sensation below the knees and often walking will relieve her symptoms. There is no history of pain or night time snoring. Clinical examination and routine blood investigations are unremarkable. She tells you that over the years her general practitioner has ordered several tests on her that have all been normal, including brain imaging, thyroid function, and monitoring of her haemoglobin levels. She is not on any medications. She is now struggling to do her job as a teacher and is now working only part time because of the symptoms. Considering the likely underlying diagnosis, which of the following would you use to try and alleviate her symptoms?

	Lithium
	Quinine
	Pramipexole
	Amitriptyline
	Acetazolamide

Dashboard

Overall score: 0%

1 -

□ Question 44 of 280

□ □

A 73-year-old man who is a chronic alcoholic is brought to the Emergency Department by an ambulance. He was found collapsed in the street. On admission his airway, breathing and circulation are satisfactory. His GCS is 13/15 (eyes = 3, verbal = 4, movement = 6) although his level of consciousness appears to be fluctuating. There are no obvious signs of external head injury.

A CT head (without contrast) is performed:



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What is the most likely diagnosis?

Subarachnoid haemorrhage

	Wernicke's encephalopathy
	Subdural haematoma
	Meningioma
	Extradural haematoma

Dashboard

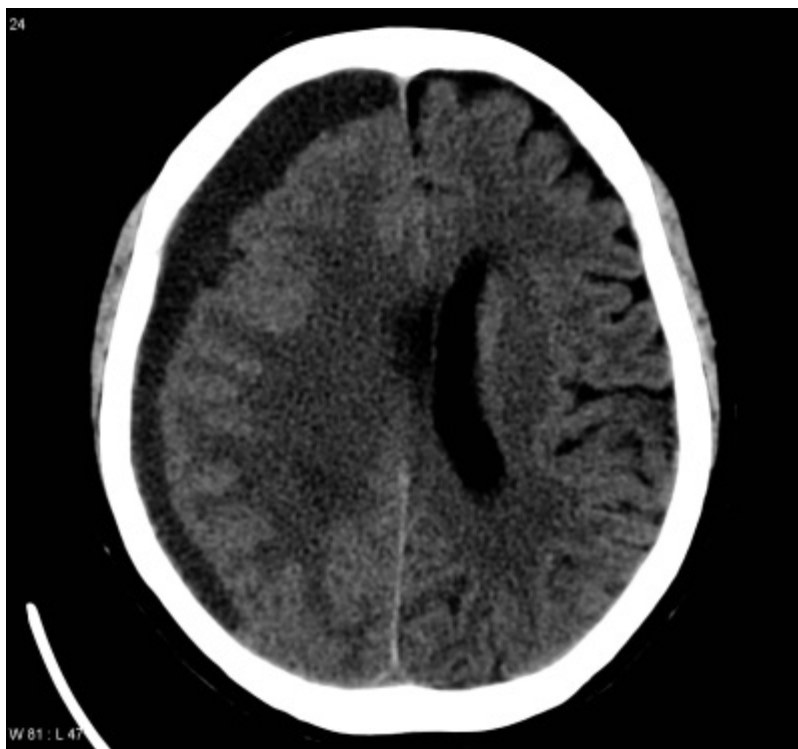
Overall score: **0%**
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□ Question 44 of 280



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Dashboard

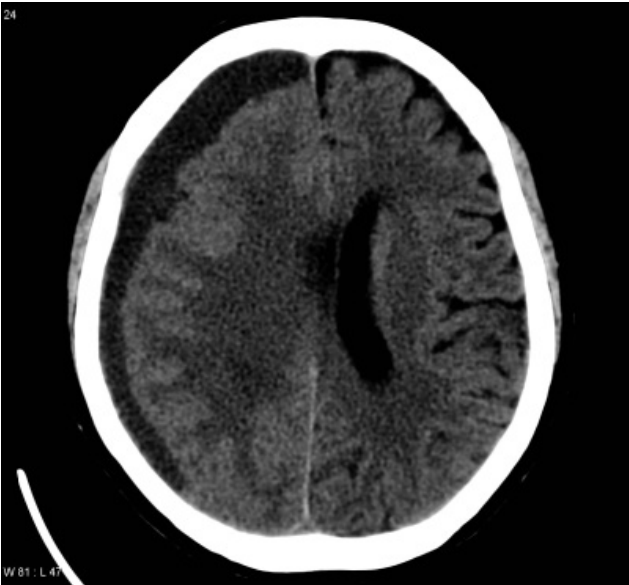
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Question 44 of 280

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Dashboard

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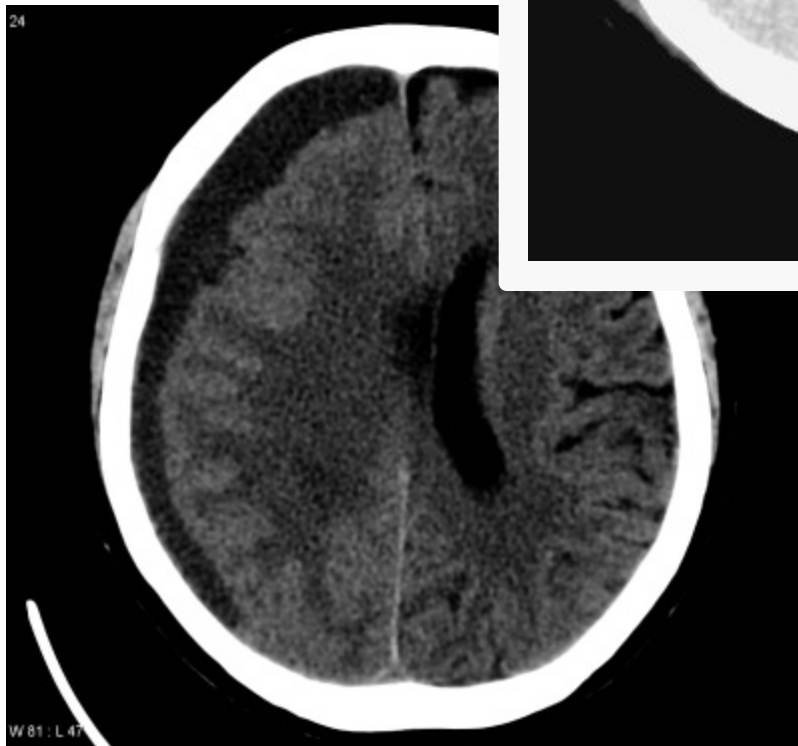
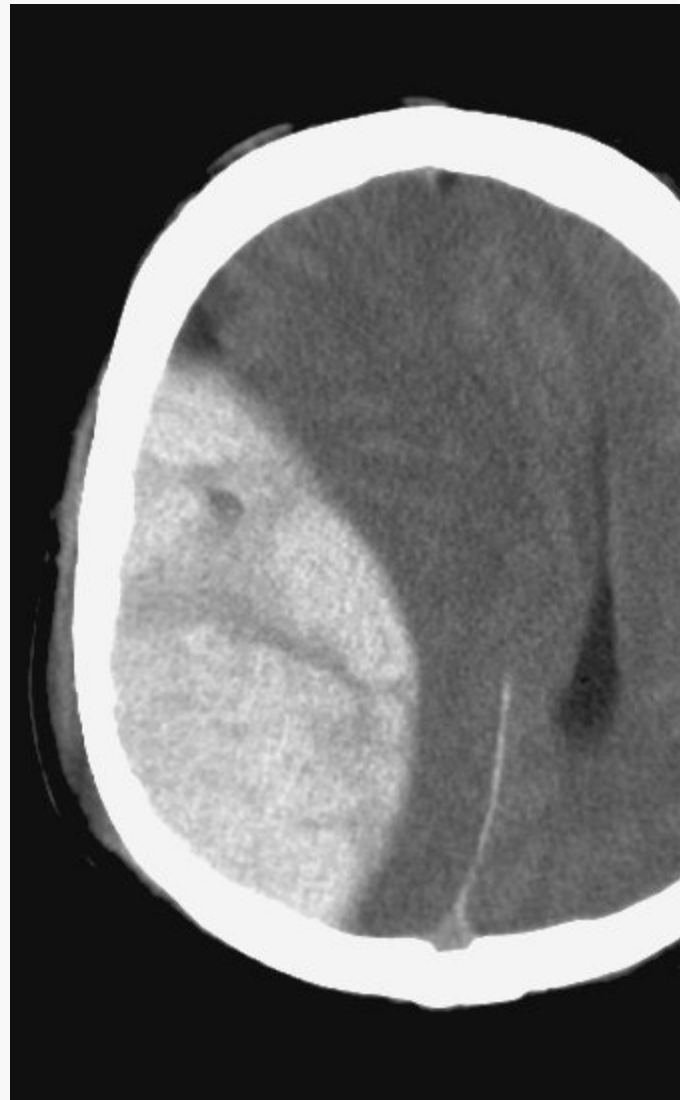
1 -



□ Question 44 of 280

A 73-year-old man who is a chronic alcoholic is brought to the Emergency Department after collapsing in the street. On admission his airway, breathing and circulation are stable. His Glasgow Coma Scale (verbal = 4, movement = 6) although his level of consciousness appears to be improving. There is no external head injury.

A CT head (without contrast) is performed:



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What is the most likely diagnosis?

Subarachnoid haemorrhage

	Wernicke's encephalopathy
	Subdural haematoma
	Meningioma
	Extradural haematoma

Dashboard

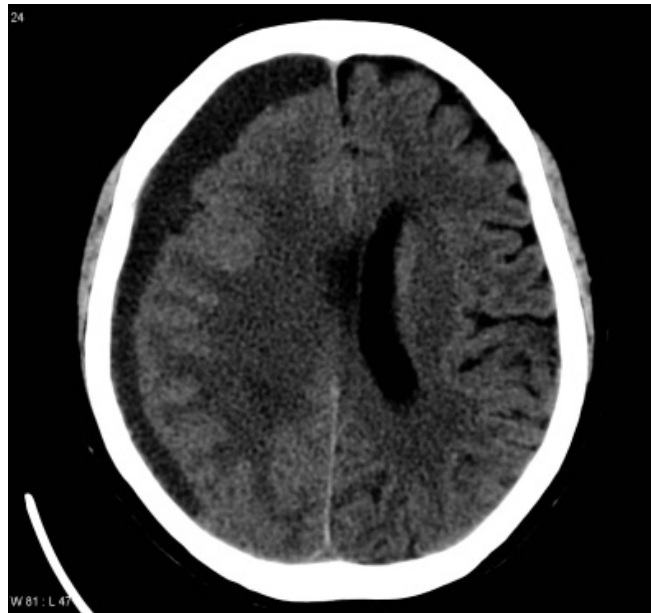
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Question 44 of 280

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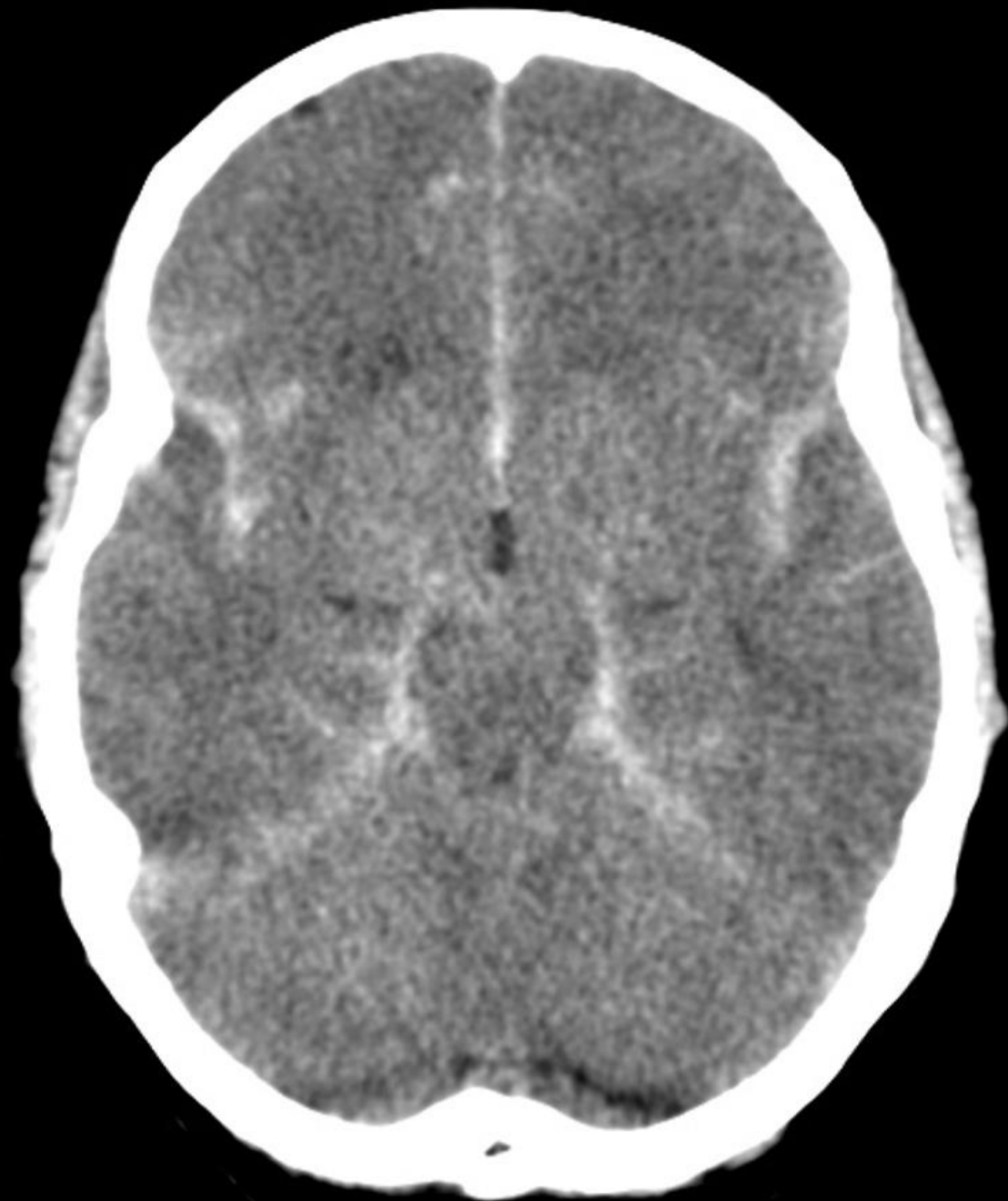
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Dashboard

Overall score: **0%**
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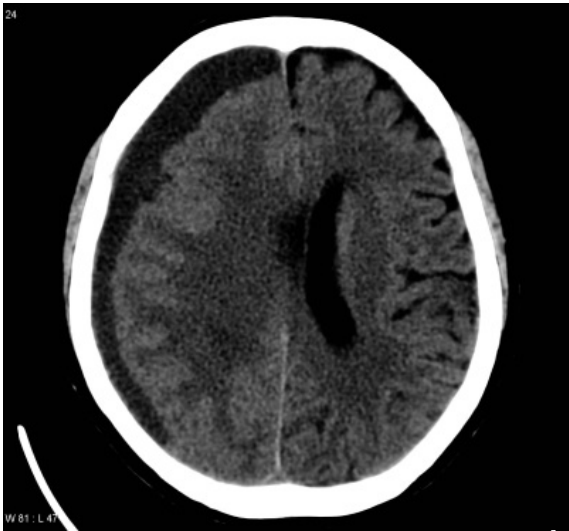


Question 44 of 280



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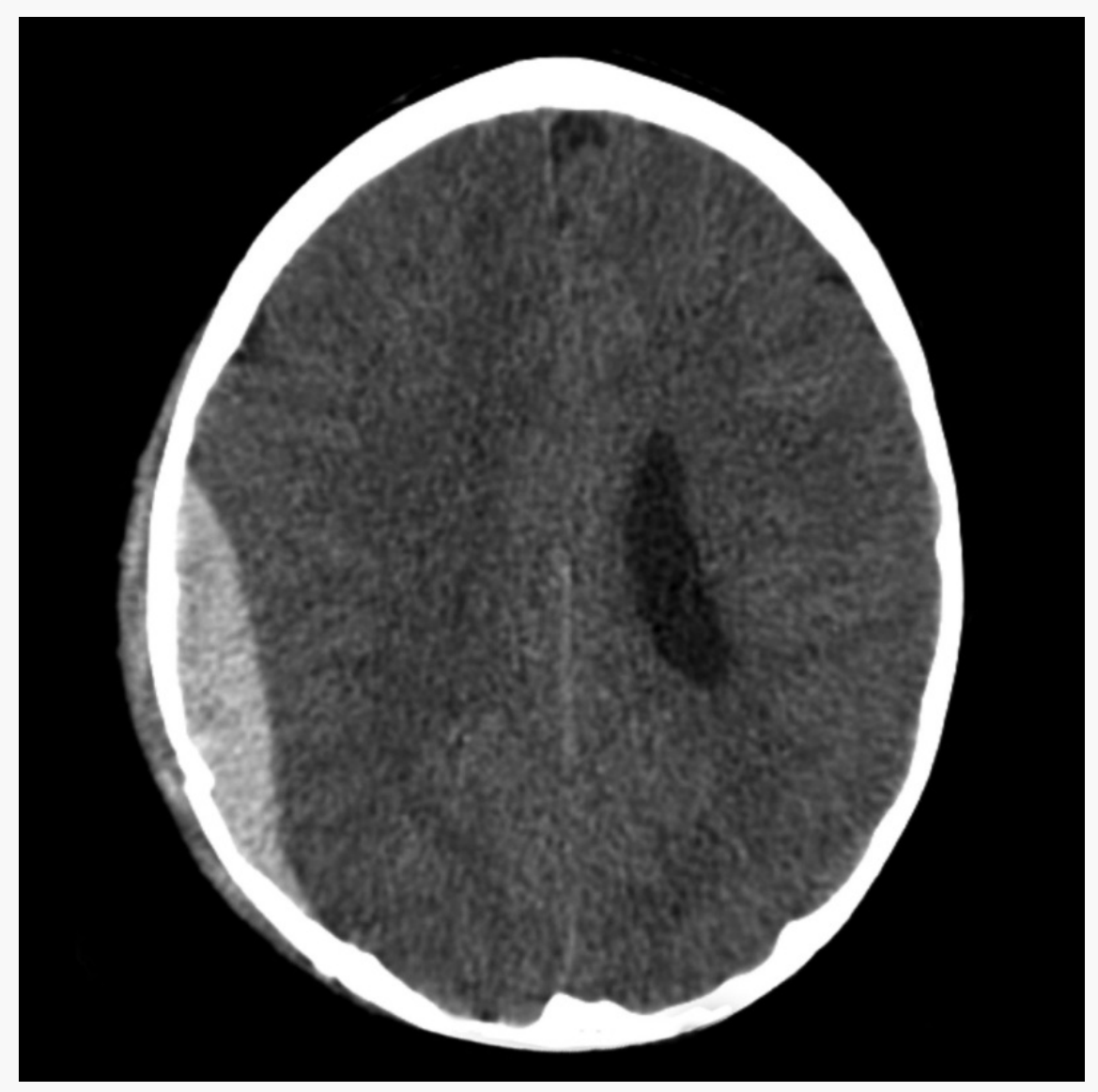
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Dashboard

Overall score: 0%

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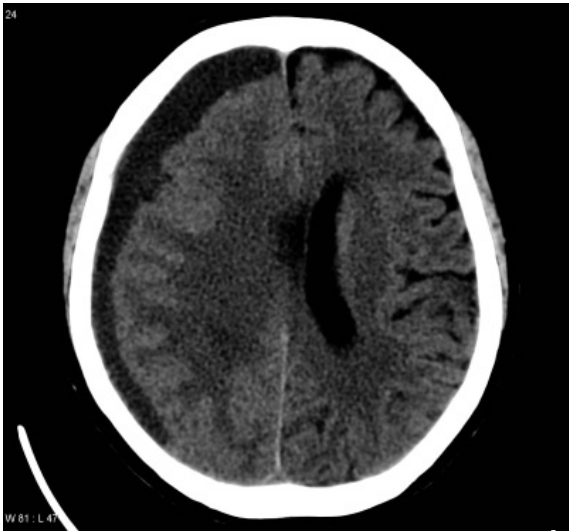


Question 44 of 280



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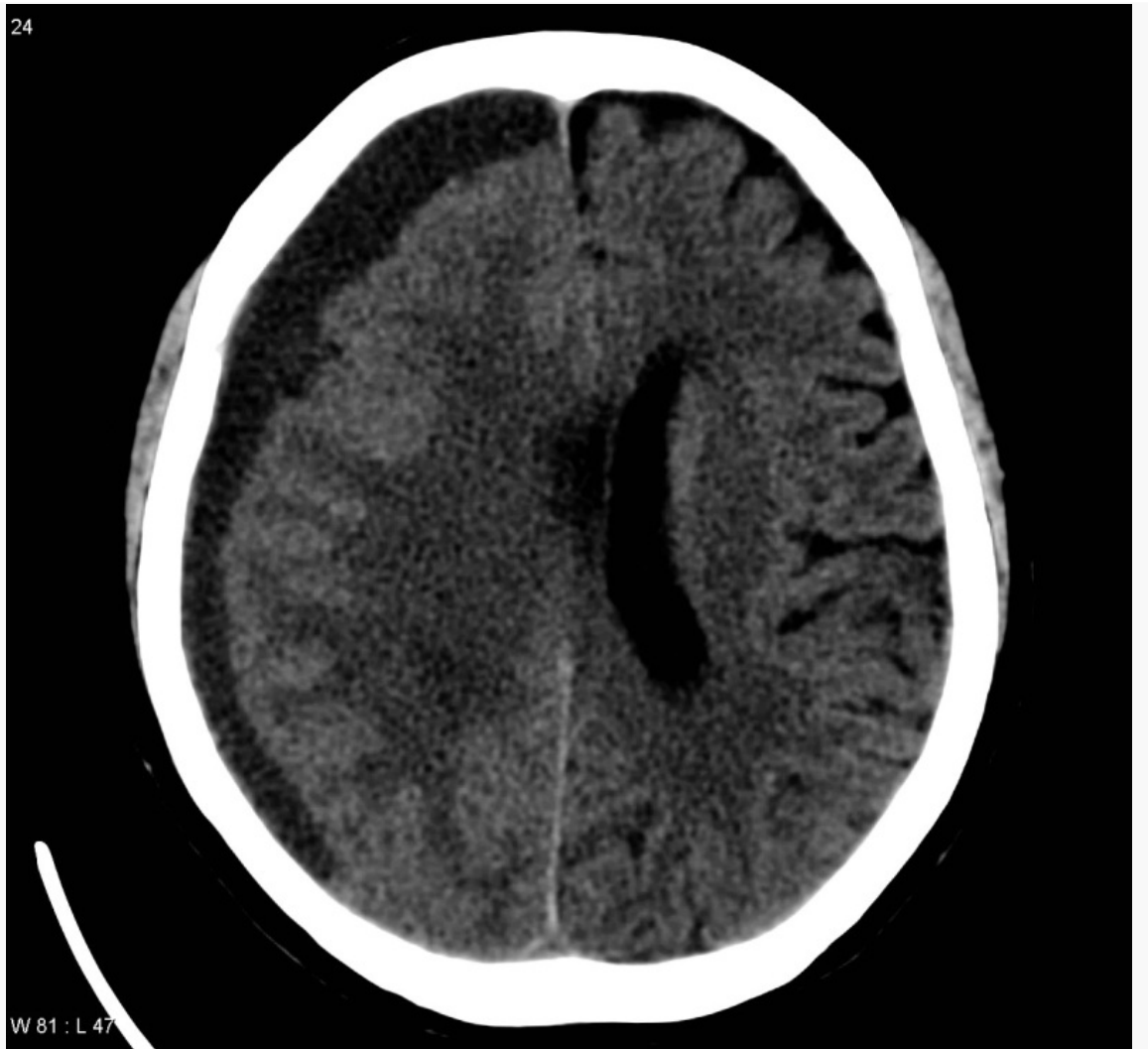
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	Wernicke's encephalopathy
	Subdural haematoma
	Meningioma
	Extradural haematoma

Dashboard

Overall score: 0%

1 -

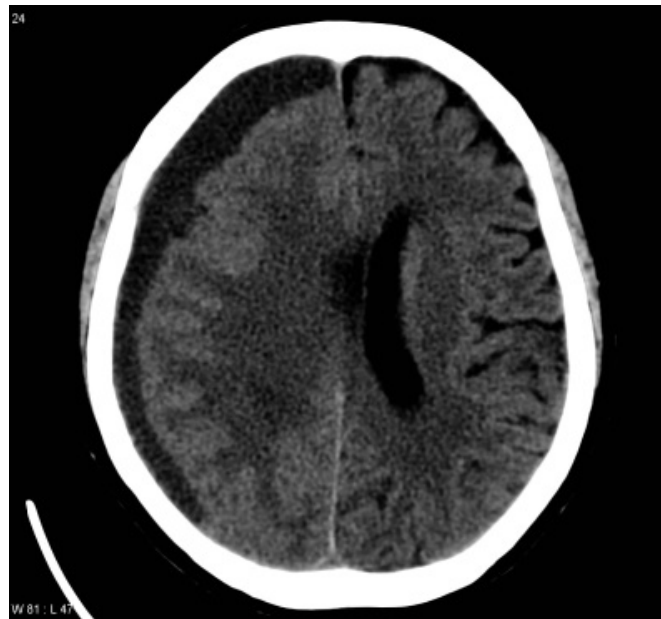


□ Question 44 of 280

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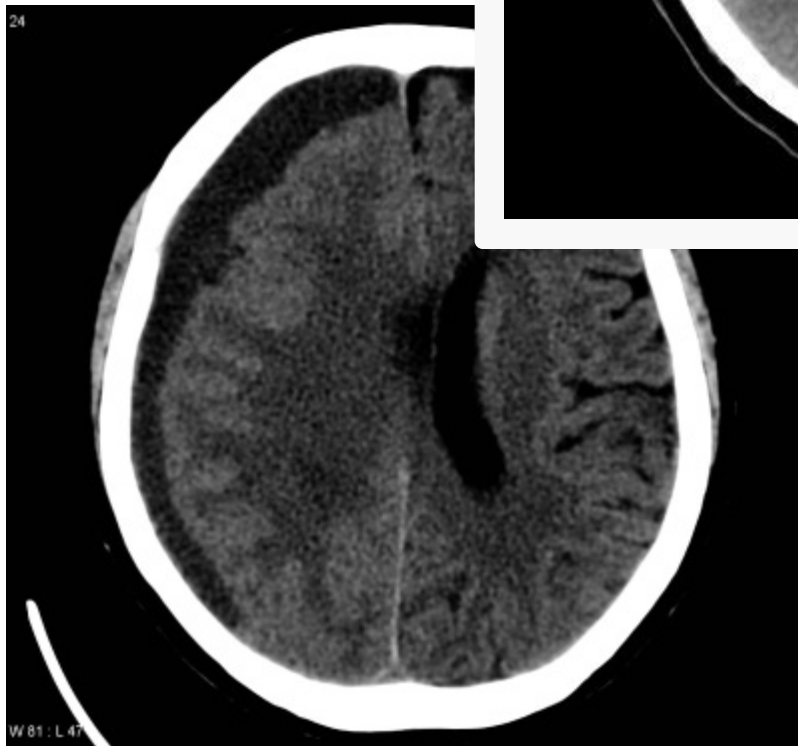
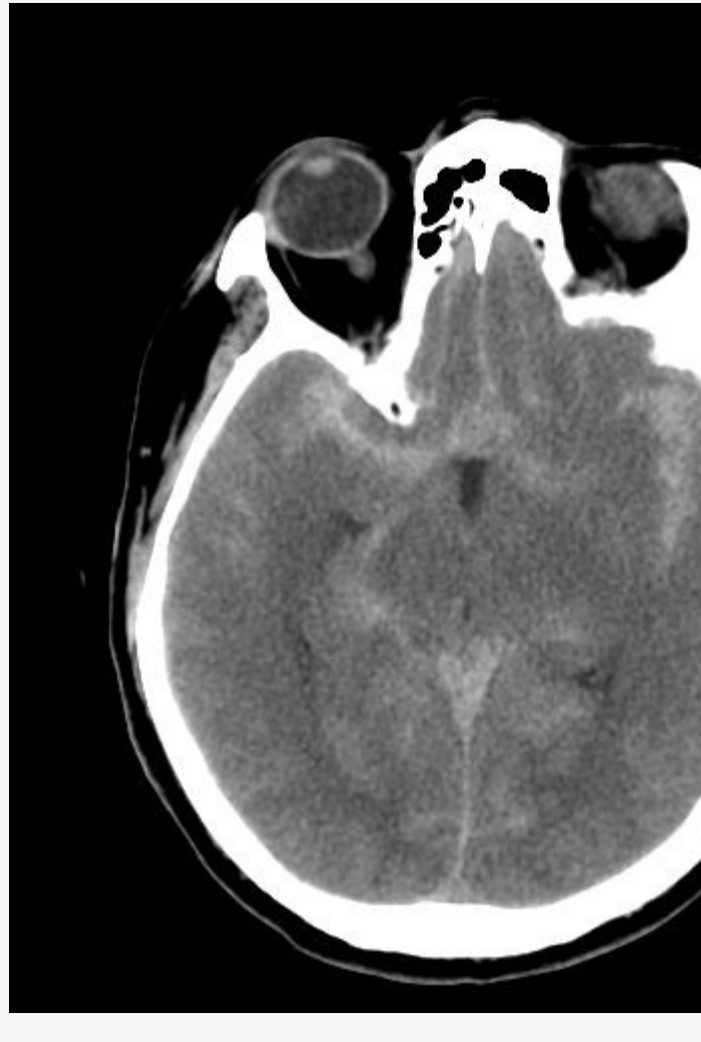
1 -



□ Question 44 of 280

A 73-year-old man who is a chronic alcoholic is brought to the Emergency Department collapsed in the street. On admission his airway, breathing and circulation are stable. His Glasgow Coma Scale (GCS) is (eye = 3, verbal = 4, movement = 6) although his level of consciousness appears to improve with external head injury.

A CT head (without contrast) is performed:



© Image used on license from Radiopaedia

What is the most likely diagnosis?

Subarachnoid haemorrhage

	Wernicke's encephalopathy
	Subdural haematoma
	Meningioma
	Extradural haematoma

Dashboard

Overall score: **0%**
1 -

□ Question 45 of 280



A 45-year-old man complains of lower limb numbness associated with weakness. He also noted some recent problems with urinary incontinence and has recently attended the opticians due to some blurring of vision

On examination he has bilateral lower limb weakness (grade 3+/5). His tone was spastic on both sides with exaggerated reflexes. The planter reflexes were up-going bilaterally. The sensory level was at the tenth thoracic vertebra (T10). Eye examination revealed a normal visual acuity with a normal fundal examination.

He has a history of asthma and is currently well controlled with just a salbutamol inhaler.

Magnetic resonance imaging (MRI) of the brain is normal. MRI of the spine shows a hyper intense lesion spanning from (T7-T12). The following investigations had been ordered:

Na+	135 mmol/l
K+	4 mmol/l
Creatinine	80 µmol/l
Urea	4.5 mmol/l
CRP	5 mg/l
ESR	10 mm/hr
Urine analysis	Normal
ANA	Negative

Which one of the following investigations would be most useful to reach a diagnosis?

	Auditory evoked response potentials
	CSF analysis for oligoclonal bands
	Anti-aquaporin 4 antibodies

	Serum B12
	Visual evoked response potentials

Dashboard

Overall score: 0%

1 -

□ Question 45 of 280



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	Serum B12
	Visual evoked response potentials

Dashboard

Overall score: **0%**
1 -

Question 46 of 280

An 18-year-old female is admitted to hospital with worsening lower limb weakness. She states that it started in her ankles, but now she is unable to stand from a squatting position which is abnormal for her. On examination, she has reduced power in ankle plantar and dorsiflexion bilaterally as well as some mild weakness in her hip extensors. Her hand grip strength is normal.

A cerebrospinal fluid (CSF) study is carried out and based on the clinical syndrome and the result she is diagnosed with Guillain-Barre Syndrome (GBS).

Which of the following treatments should be commenced in the acute setting?

	Intravenous methylprednisolone
	Intravenous immunoglobulin
	Oral prednisone
	Rituximab
	Pyridostigmine

Dashboard

Overall score: 0%

1 -

Question 46 of 280

□ □

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	Intravenous immunoglobulin
	Oral prednisone
	Rituximab
	Pyridostigmine

Dashboard

Overall score: **0%**

1 -

□ Question 47 of 280



A 65-year-old man attends neurology clinic for review of his long-standing trigeminal neuralgia. He had first experienced symptoms five years previously and been troubled by his illness ever since despite frequent neurology review. The patient experiences attacks of severe shooting pain affecting the right side of his lower face, each episode usually lasting about one hour. The interval between attacks has steadily reduced over the years so that at the present time the patient experiences four to five episodes per week. The patient describes that his symptoms are profoundly limiting his life and that he rarely leaves his house for fear of an attack.

Four years previously, treatment with carbamazepine had been introduced with an initially good response to symptoms. However, patient proved to be intolerant of carbamazepine due to drowsiness. Subsequent trials of treatment with oxcarbazepine, lamotrigine and baclofen had not given lasting relief.

The patient had recently been diagnosed with depression and initiated on treatment with sertraline. He was also suffered from type 2 diabetes currently managed with diet and metformin 500 mg TDS. The patient lived with his wife and had been unable to work as a school-teacher for the past two years due to his symptoms.

Having previously been reluctant to consider surgical intervention, the patient now felt he would be willing to try any options that could improve his symptoms.

MRI brain with / without contrast: sinuses unremarkable without evidence of inflammation; no space occupying lesion; no extra-cranial mass along course of trigeminal nerves; no evidence of widespread demyelination plaque; no evidence of previous infarction; no abnormal enhancement of the trigeminal nerves.

What is the appropriate surgical intervention for this patient?

	Stereotactic radiosurgery
	Balloon compression
	Microvascular decompression
	Radiofrequency lesioning
	Glycerol rhizolysis

Dashboard

Overall score: **0%**

1 -

□ Question 47 of 280

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Dashboard

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1 -

□ Question 48 of 280



A 59-year-old male presents with 4-day history of sudden onset visual disturbance in his right eye. He reports it to be his first episode with no previous history of visual problems. His past medical history includes type 2 diabetes mellitus, hypertension and raised BMI. He is an active smoker of 40 pack years.

On examination, a right relative afferent papillary defect is detected. Pupils were equal in size. A visual field defect is demonstrated in the inferior nasal field of the right eye without a precise quadrantanopia or altitudinal pattern. Temporal arteries are non-tender and not thickened. Visual acuity on Snellen chart in left eye was 6/6, 6/18 in right. Colour vision on Ishihara plates were 17/17 on left, 5/17 on right. Fundoscopy is unremarkable. Examination of the upper and lower limbs are unremarkable, no language deficits are noted. Auscultation revealed normal heart sounds and no bruits.

His blood tests are as follows:

Hb	154 g/l
Platelets	$190 \times 10^9/l$
WBC	$7.8 \times 10^9/l$
ESR 5 mm/hr	

Na ⁺	141 mmol/l
K ⁺	3.9 mmol/l
Urea	5.6 mmol/l
Creatinine	80 μ mol/l

What is the most likely diagnosis?

	Right retinal infarct
	Right temporal arteritis

	Right non-arteritic ischaemic optic neuropathy
	Left middle cerebral artery ischaemic stroke
	Left occipital ischaemic stroke

Dashboard

Overall score: **0%**
1 -

□ Question 48 of 280



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Dashboard

Overall score: **0%**
1 -

□ Question 49 of 280

□ □

A 65-year-old male presents to the neurology outpatient department with a history of recurrent bouts of unsteadiness and vomiting over the last 10 years, with partial resolution. He has also had episodes of visual problems, which he describes as the sudden loss of vision in the right eye, with an almost complete recovery of vision over the course of the next few weeks. He has a history of type 2 diabetes and is hypertensive and is generally non-compliant with his treatment. He is also a smoker with a 50 pack year history.

His medication includes glimepiride 2mg daily and metformin 500mg TDS. He also takes telmisartan 40mg daily.

On examination, he has nystagmus in the right eye with the fast component towards the right. His gait is ataxic and he has evidence of spasticity in both lower limbs with exaggerated reflexes and bilateral ankle clonus. Fundoscopic examination revealed a pale optic disc.

MRI brain shows diffuse lesions in multiple sites. The report queried demyelinating plaques vs multiple infarcts.

Which of the following would be the most appropriate next investigation?

	MRI spinal cord
	CSF examination for oligoclonal bands
	MR angiography of the vertebrobasilar system
	Titres of anti-Hu antibodies
	Visual evoked potentials

Dashboard

Overall score: 0%

1 -

□ Question 49 of 280

□ □

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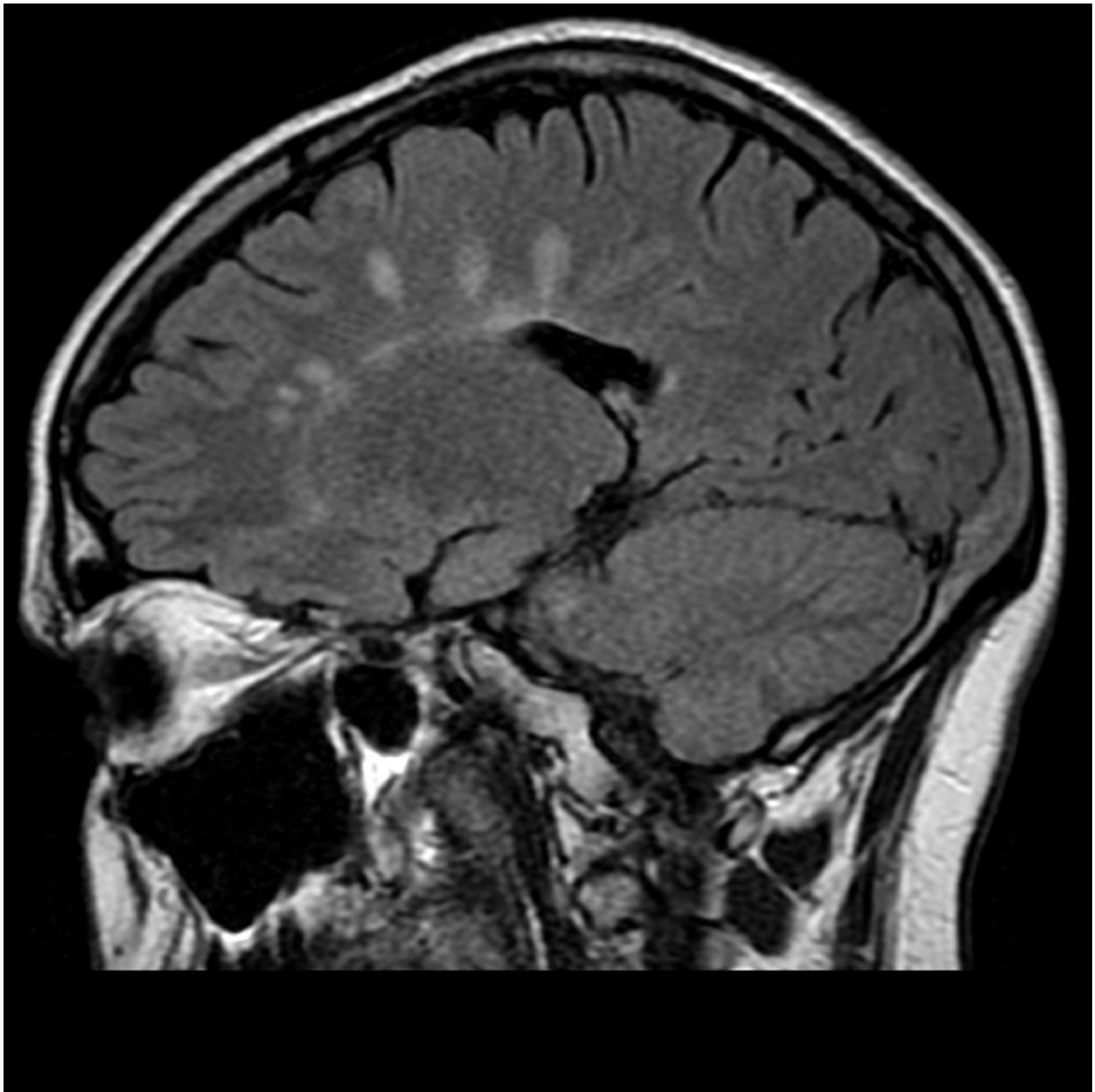
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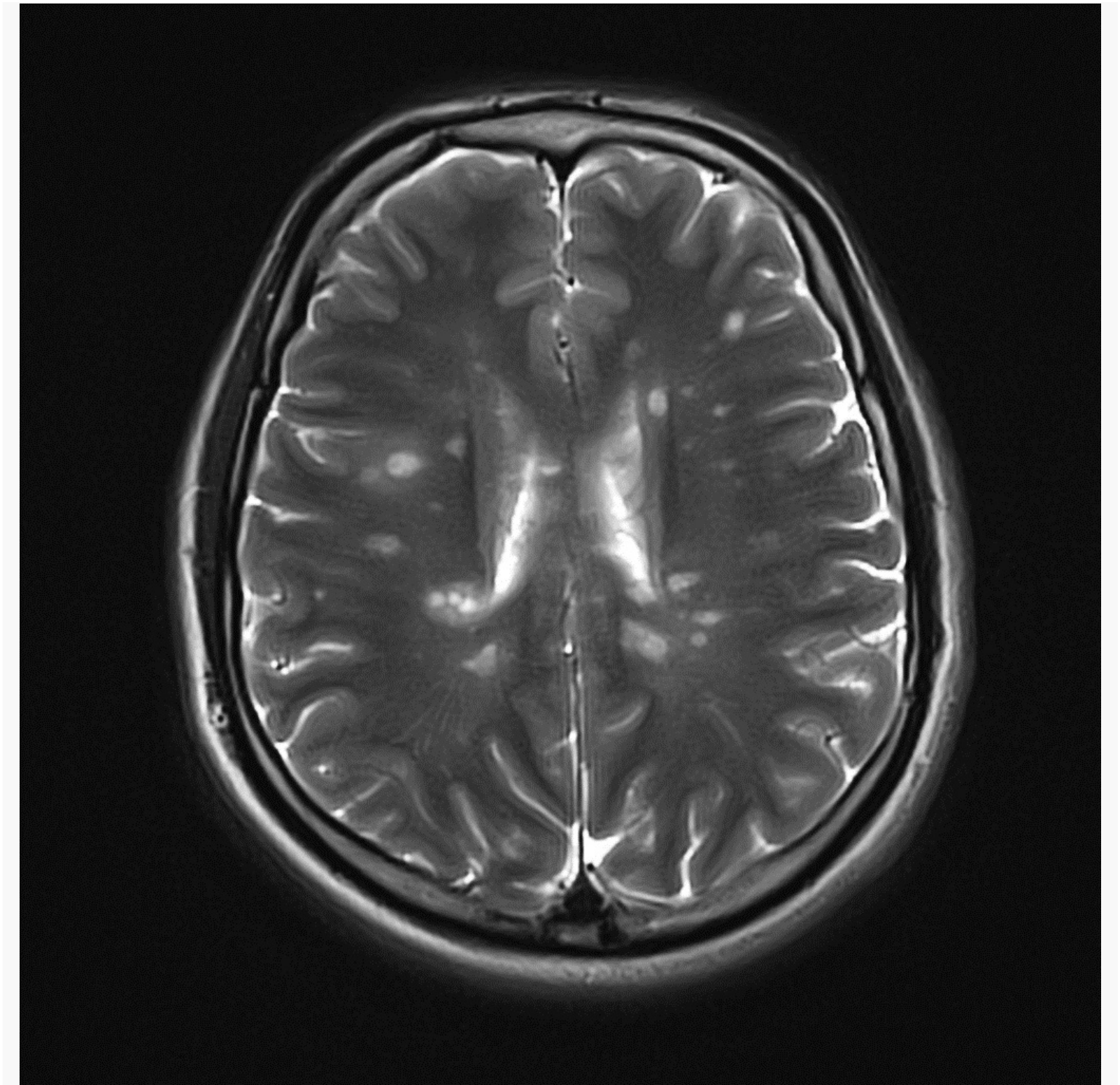
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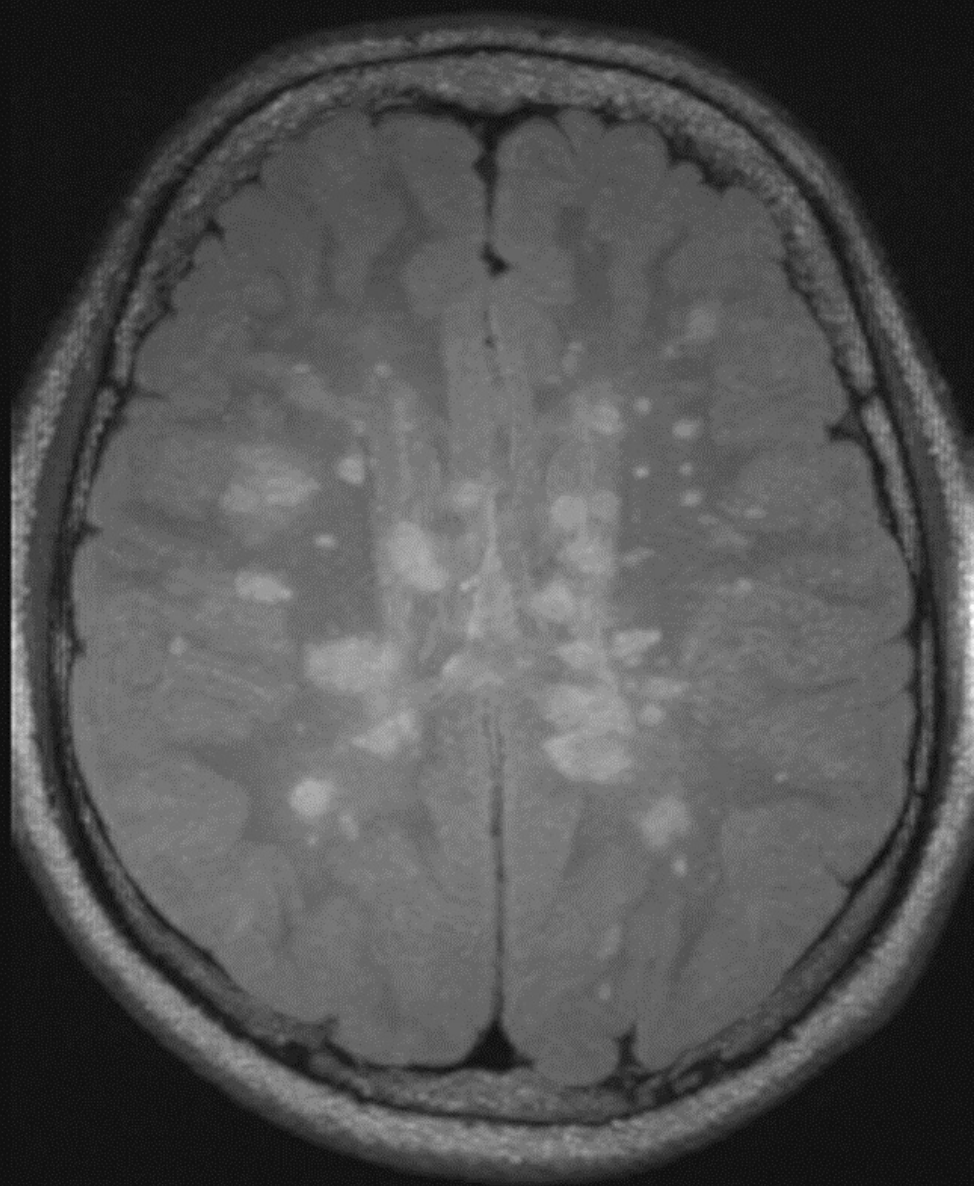
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	MR angiography of the verterbrobasilar system
	Titres of anti-Hu antibodies
	Visual evoked potentials

Dashboard

Overall score: 0%

1 -



Question 50 of 280



A 35-year-old female presents to the Emergency Department with three days of increasing weakness in the left arm and reduced visual acuity in the left eye. She was diagnosed with relapsing-remitting multiple sclerosis two years earlier. She takes fingolimod as maintenance therapy and denies any compliance issues.

On examination, she has weakness in wrist extension and finger abduction in the left hand and visual acuity in the left eye was measured at 6/24 with an associated reduction in colour saturation. Her blood tests were unremarkable and in particular, her white cell count was normal. Her MRI scan does show two new enhancing lesions in the right pericallosal region.

How should this be managed acutely?

	Commence high dose oral prednisone and wean over a month
	Commence intravenous dexamethasone
	Commence natalizumab infusion
	Commence high dose methylprednisolone for 3-5 days
	Biopsy the enhancing lesions

Dashboard

Overall score: 0%

1 -

Question 50 of 280



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Dashboard

Overall score: 0%

1 -

Question 51 of 280

A 58 year old man progressively develops hand clumsiness, gait difficulty and dysphagia over several months. His voice has also become high pitched and nasal. Sensory examination has remained normal throughout. Plantars are up-going, with absent ankle reflexes bilaterally and wasting of the distal leg musculature. Which treatment has been shown to lengthen survival for the underlying condition?

	Intravenous immunoglobulin
	Donepezil
	Pyridostigmine
	Non-invasive ventilation (NIV)
	Steroids

Dashboard

Overall score: **0%**

1 -

Question 51 of 280

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	Donepezil
	Pyridostigmine
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	Steroids

Dashboard

Overall score: **0%**

1 -

□ Question 52 of 280

□ □

A 20-year-old woman presents to a general neurology clinic. Over the last year, she has noted that she is becoming increasingly clumsy with heavy objects. She describes struggling to wash her hair and complete certain house hold chores such as hanging washing up.

Neurological examination findings of the upper limbs have been summarised below. Power has been recorded as per the Medical Research Council (MRC) grading system.

	Left arm	Right arm
Tone	normal	normal
Power:		
shoulder abduction	3/5	3/5
shoulder adduction	4/5	4/5
elbow flexion	4/5	5/5
elbow extension	5/5	5/5
wrist flexion	5/5	5/5
wrist extension	5/5	5/5
Reflexes:		
Biceps	normal	normal
Triceps	normal	normal
Supinator	normal	unable to elicit
Sensation	intact	intact

When examining her cranial nerves it is noted there is drooping of her eyelids and decreased facial expression. Tests for fatigability were unremarkable. There were no other abnormal findings.

What is the most likely diagnosis?

	Myasthenia gravis
	Facioscapulohumeral dystrophy
	Multiple sclerosis
	Miller-Fisher syndrome
	Becker's muscular dystrophy

Dashboard

Overall score: 0%

1 -

□ Question 52 of 280

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1 -

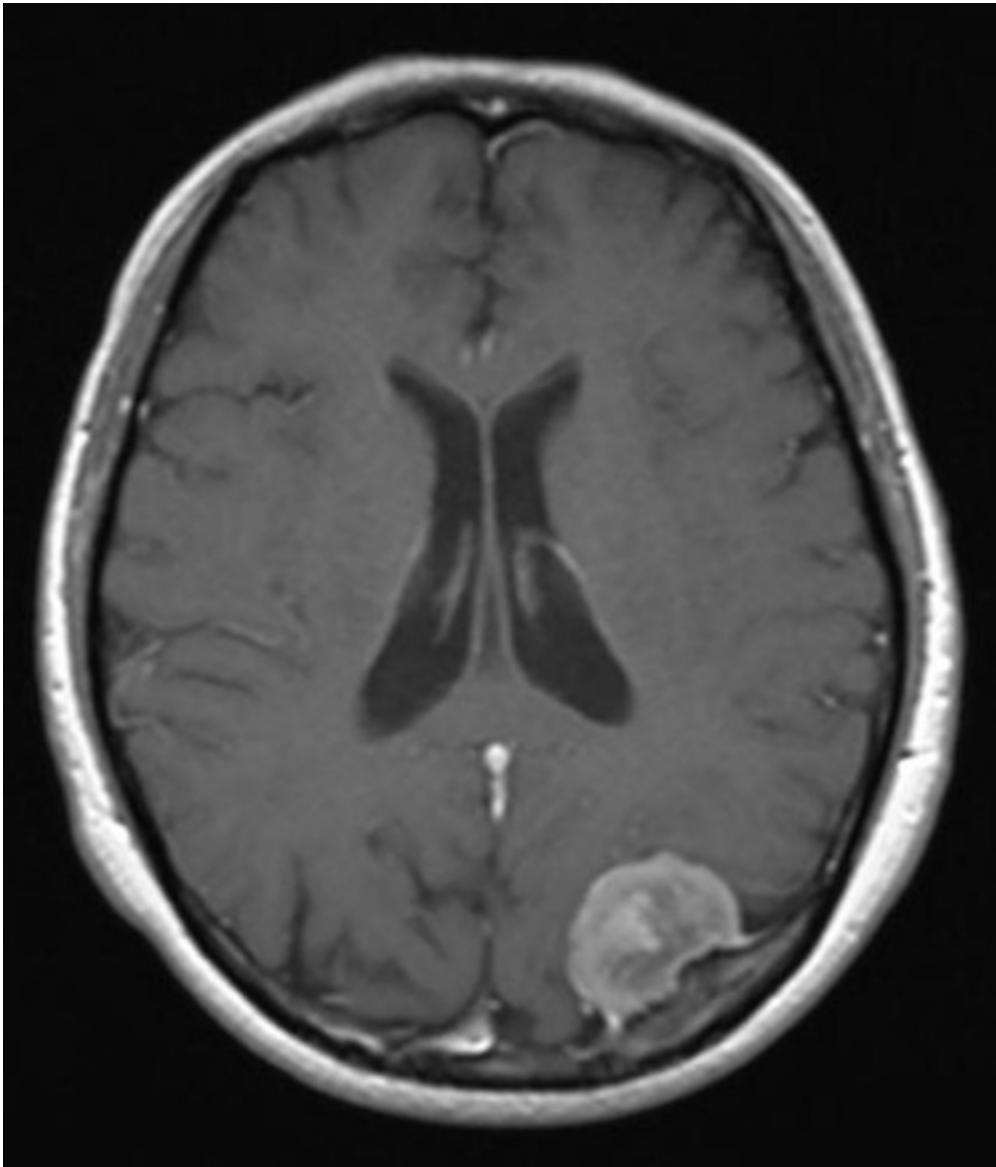
□ Question 53 of 280

□ □

A 54-year-old woman is admitted to the Emergency Department after having a seizure. This occurred whilst she was a passenger in a car. There is no history of trauma. By the time of her admission she is alert with a GCS of 15/15. Her partner describes a generalised seizure with a post-ictal phase lasting around 30 minutes.

On examination her heart rate is 90/min, blood pressure 102/60 mmHg and temperature 37.1°C. There are no focal neurological signs.

A MRI scan is requested:



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What is the most likely diagnosis?

	Extradural haematoma
	Gliolastoma multiforme
	Subdural haematoma
	Meningioma
	Oligodendroma

Dashboard

Overall score: 0%

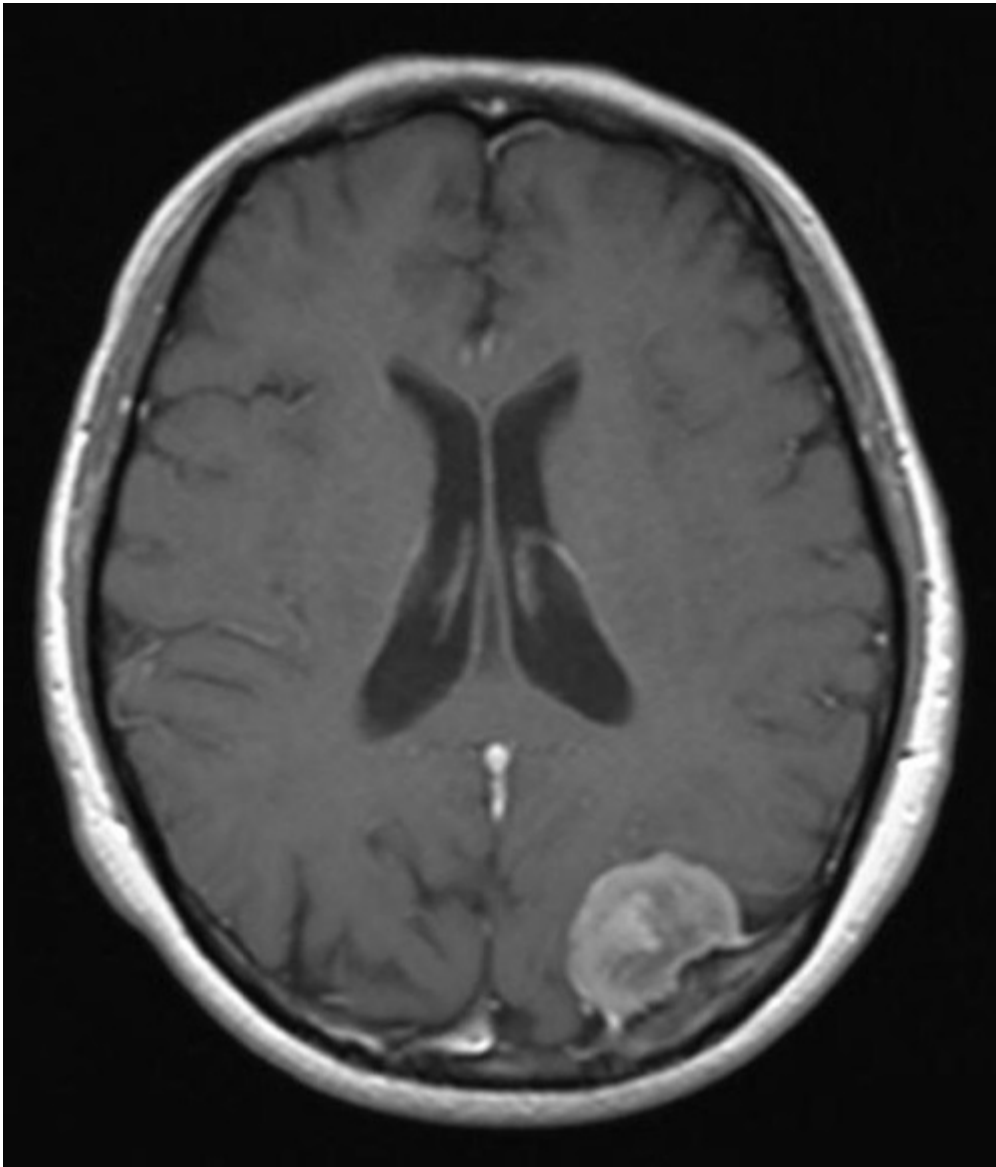
□ Question 53 of 280

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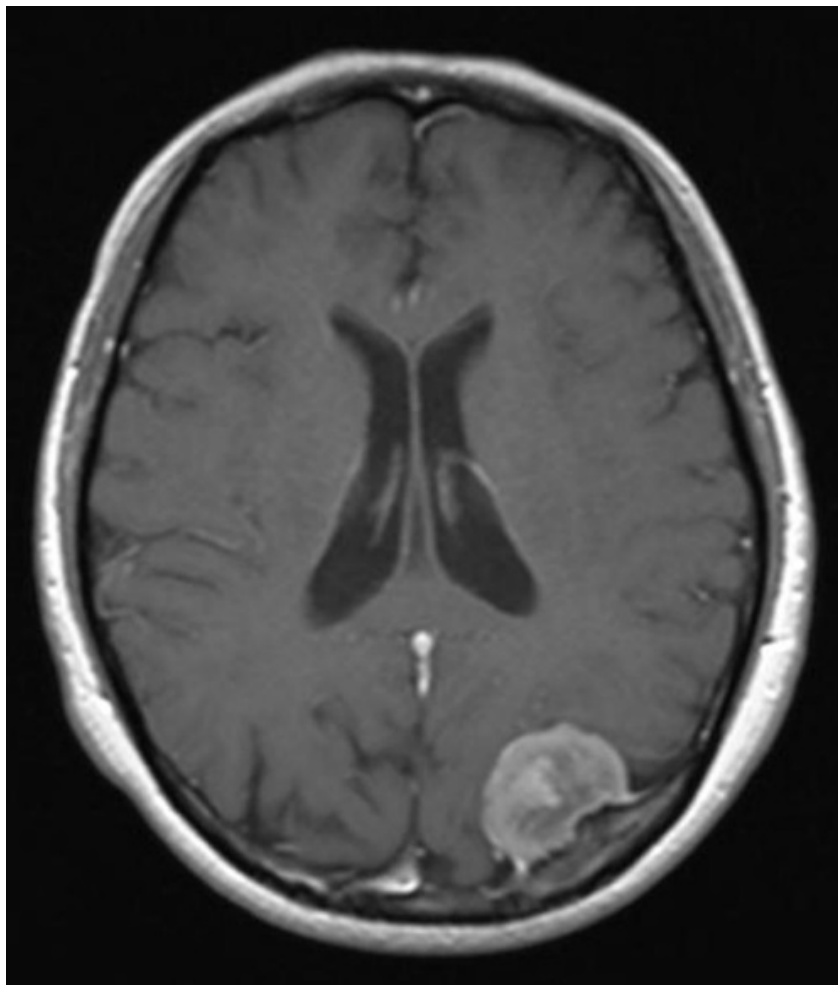
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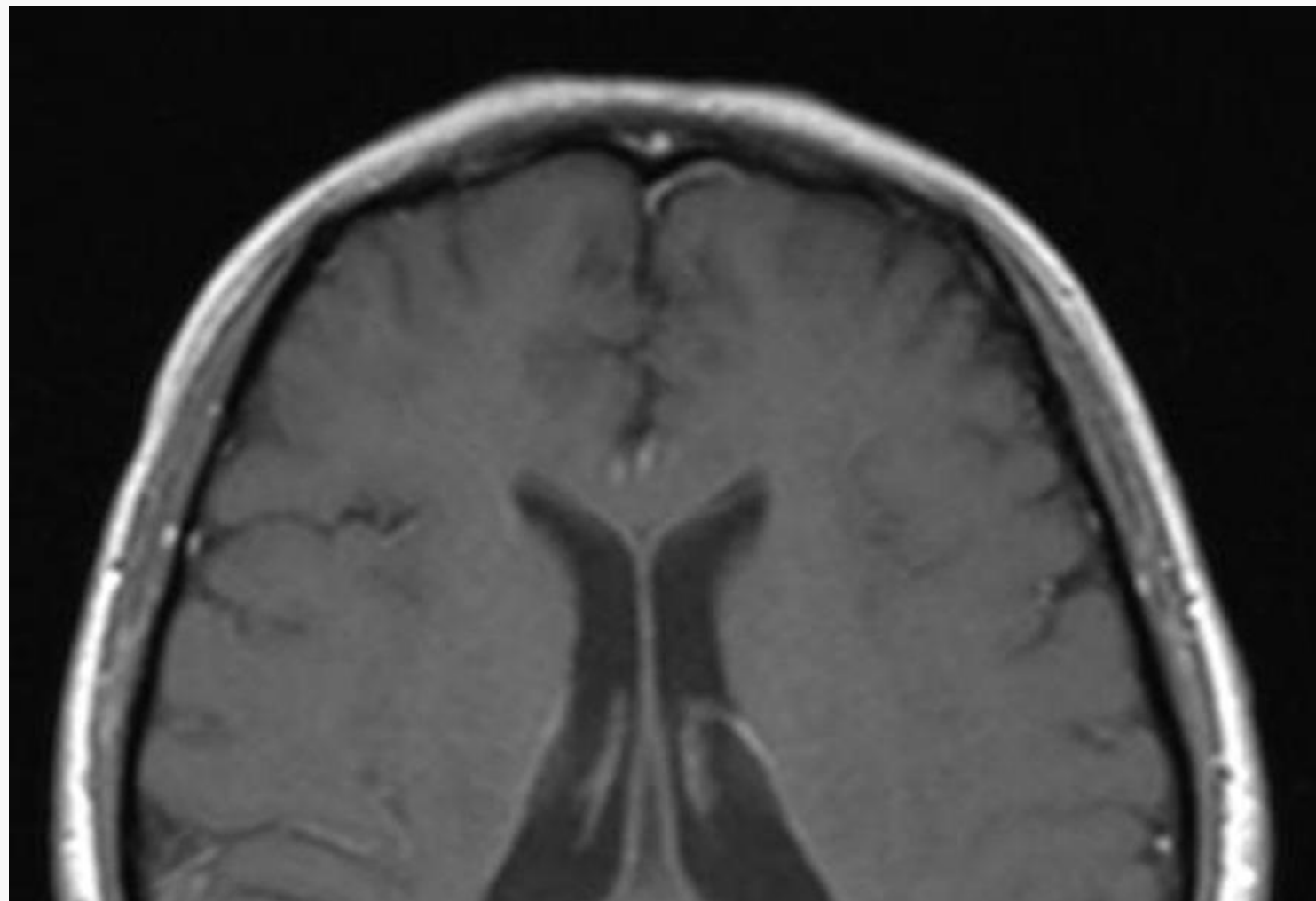
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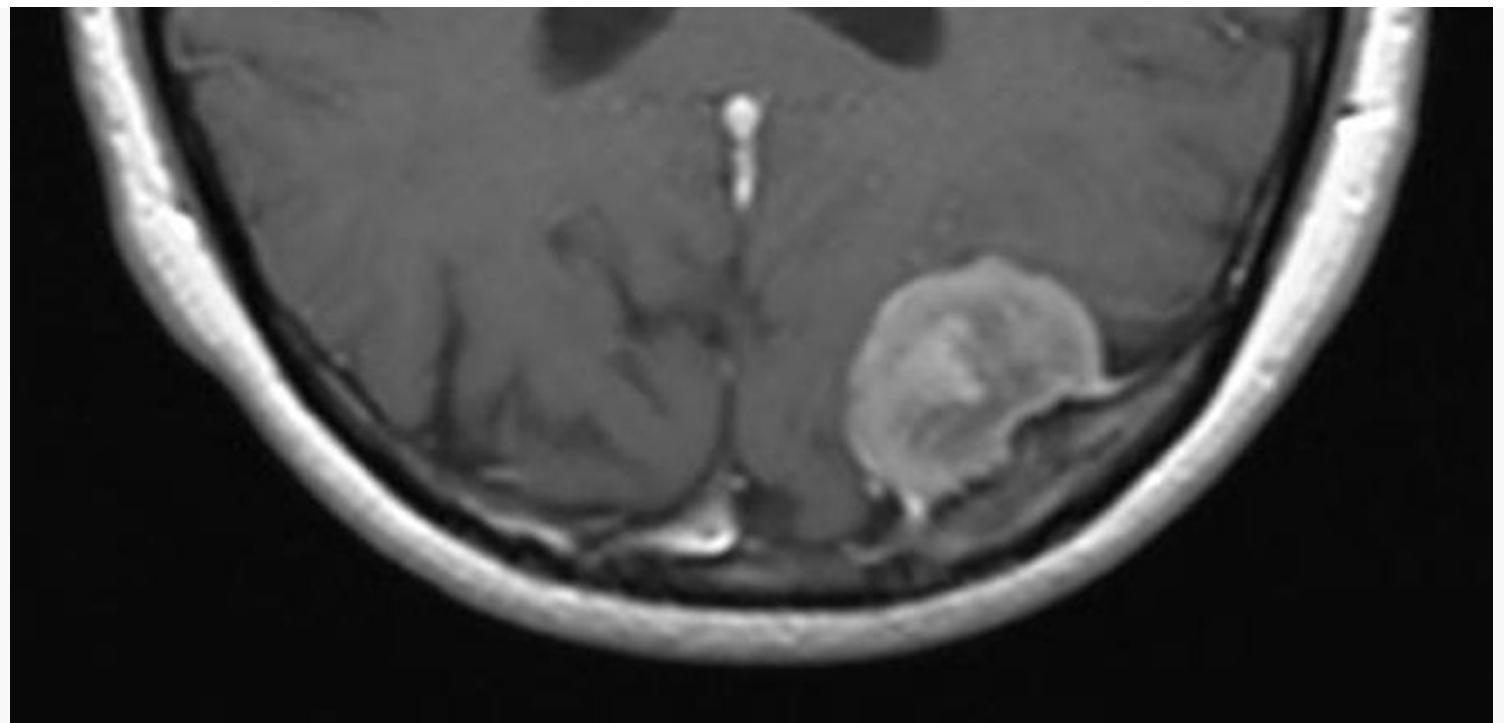
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Dashboard

Overall score: **0%**

1 -





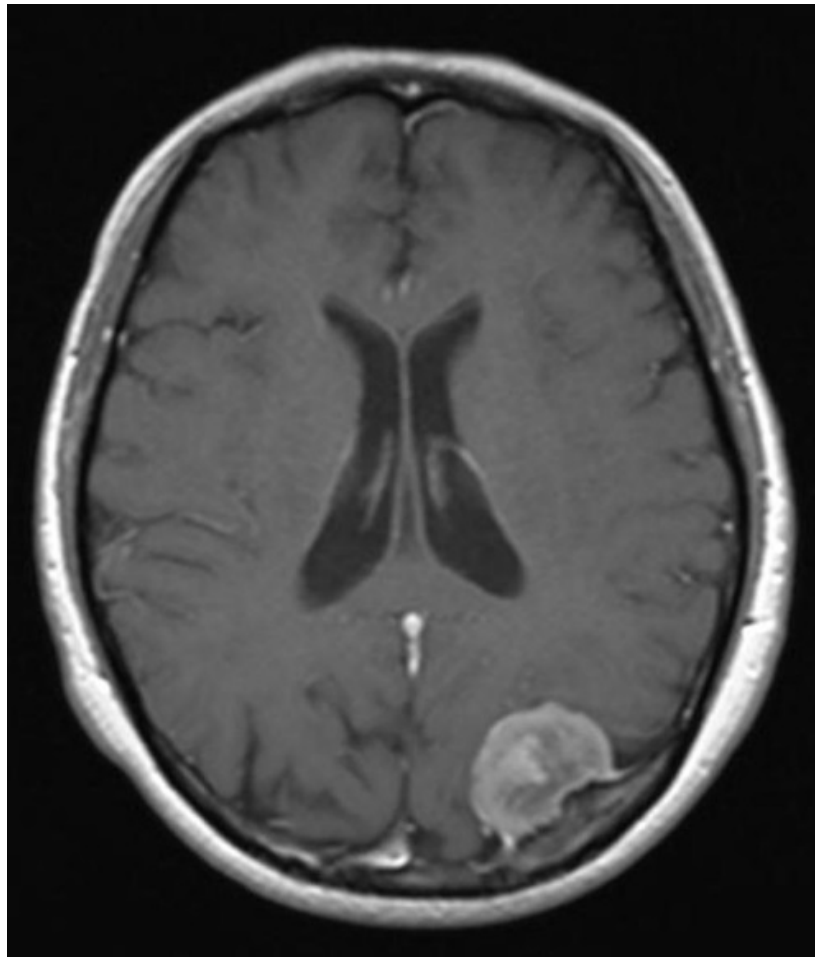
□ Question 53 of 280

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Dashboard

Overall score: **0%**

1 -



□ Question 54 of 280

□ □

A 57 year old male presents with a three month history of unintentional weight loss (13kg over 3 months) and a chronic non-productive cough. He has just returned from a months holiday in India. He denies haemoptysis or chest pain. He is a lifelong non-smoker. He has no past medical history except a period of generalised limb weakness four years ago, when he was referred to outpatient neurology clinic and prescribed 3,4 diaminopyridine following investigations. His blood tests are unremarkable. However, his CXR demonstrates a rounded opacity in his right mid zone, about 2 cm from his right main bronchus. What is the diagnosis?

	Tuberculosis
	Aspergilloma
	Small cell lung carcinoma
	Non-small cell carcinoma
	<i>Pneumocystitis Jirovecii</i> infection

Dashboard

Overall score: 0%

1 -

□ Question 54 of 280

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Dashboard

Overall score: **0%****1** -

□ Question 54 of 280

□ □

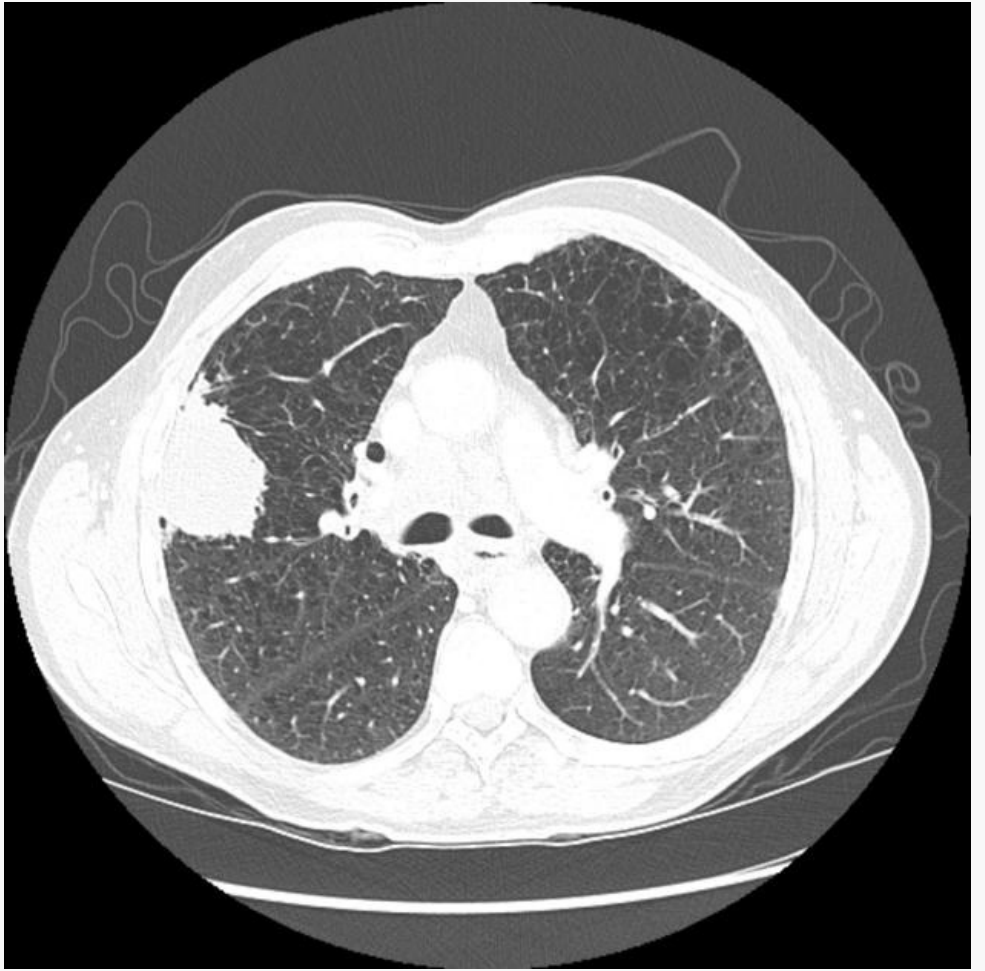
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	<i>Pneumocystitis Jirovecii</i> infection

Dashboard

Overall score: 0%

1 -



Question 55 of 280



A 48-year-old male presents with a sudden onset occipital headache onset 2 and half hours ago, associated with slurred speech, vomiting and unsteadiness in all movements. In the 90 minutes after admission to the emergency department, it was noted that the patient became increasingly drowsy, deteriorating from a GCS of 15 on admission to E3 V4 M5. On examination, pupils are equal, his speech is dysarthric and bilateral plantars are downgoing. You are unable to elicit more formal power, tone or sensation examination in the patient. An initial CT head is unremarkable but a subsequent MRI head with diffusion weighting sequences demonstrates restricted diffusion in bilateral cerebellar hemispheres with significant swelling around the cerebellum, brainstem and aqueduct. GCS currently 14/15 at 10 hours post-event. You have initiated aspirin 300mg and inserted a nasogastric tube. What is the appropriate management?

	Add clopidogrel 300mg
	Start warfarinisation
	Thrombolysis
	Discuss with neurosurgery for decompressive posterior craniectomy
	Hourly neuro observations with empirical anti-seizure medications

Dashboard

Overall score: 0%

1 -

Question 55 of 280

□ □

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Dashboard

Overall score: **0%**

1 -

Question 56 of 280

□ □

A 26 year old female presents with a 4 month history of continuous left sided facial pain and fronto-temporal headache. She reports it to be constantly present and throbbing in nature, with exacerbations of worsened severity every 3 days. She reports exacerbations to typically be associated with injected left eye and left nasal congestion, with occasional teariness in her left eye.

She has no past medical history or drug history except the oral contraceptive pill. Her routine blood tests are unremarkable. A MRI head organised by her GP also demonstrated no intracranial pathology. An trial indomethacin you have organised is positive.

What is the most likely diagnosis?

	Short-lasting unilateral neuralgiform attacks with conjunctival injection and tearing (SUNCT)
	Hemicrania continua
	Cluster headaches
	Paroxysmal hemicrania
	Migraines

Dashboard

Overall score: 0%

1 -

Question 56 of 280

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	Hemicrania continua
	Cluster headaches
	Paroxysmal hemicrania
	Migraines

Dashboard

Overall score: **0%**

1 -

Question 57 of 280

□ □

A 75-year-old man is referred to you for the management of tremor and mobility issues. On examination, he has a noticeable resting tremor that is worse in the right hand when compared to the left. He also is quite bradykinetic when mobilising and displays mild rigidity. His speech and cognitive function do not appear to be affected. His blood pressure is 125/80 mmHg without any significant postural drop.

You suspect idiopathic Parkinson's disease. Further history taking reveals that this gentleman has had a previous significant gambling problem which is now well controlled.

Which of the following medications, in particular, should be avoided in this patient?

	Rasagiline
	Levodopa/carbidopa
	Pramipexole
	Entacapone
	Amantadine

Dashboard

Overall score: 0%

1 -

□ Question 57 of 280

□ □

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Dashboard

Overall score: **0%****1** -

Question 57 of 280

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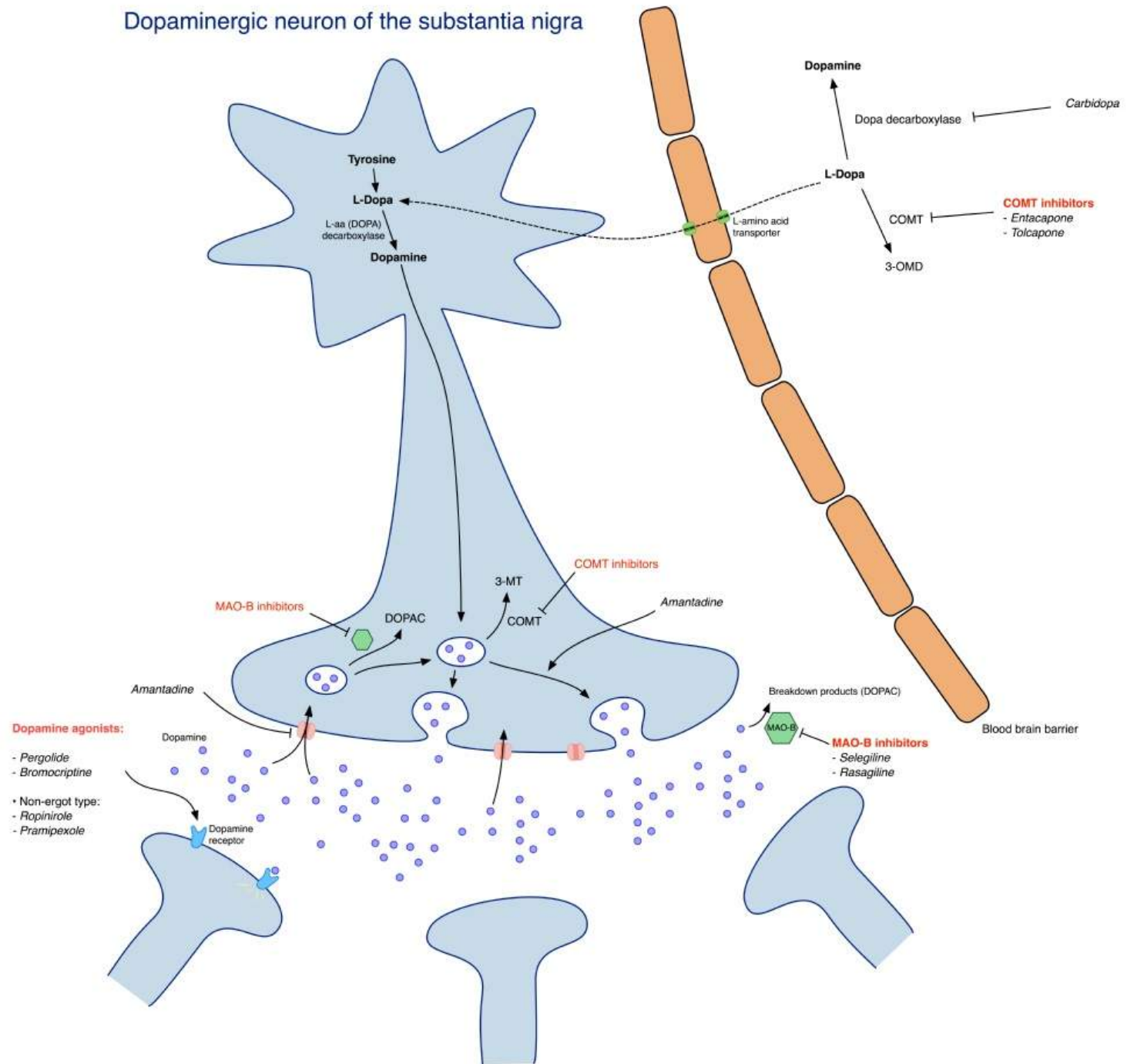
	Rasagiline
	Levodopa/carbidopa
	Pramipexole
	Entacapone
	Amantadine

Dashboard

Overall score: **0%**

1 -

Dopaminergic neuron of the substantia nigra



Question 58 of 280

□ □

A 25-year-old man presents with a four-day history of anorexia, feverishness and vertigo. He has had intermittent difficulty balancing and staying upright when walking and has had episodes of mild vertigo lasting 10-20 minutes at a time. His hearing is unimpaired. On examination, he has some cervical lymphadenopathy. The examination is otherwise unremarkable. What is the likely diagnosis?

	Meniere's disease
	Benign Paroxysmal Positional Vertigo
	Otitis media
	Vestibular neuronitis
	Multiple sclerosis

Dashboard

Overall score: 0%

1 -

Question 58 of 280

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	Benign Paroxysmal Positional Vertigo
	Otitis media
	Vestibular neuronitis
	Multiple sclerosis

Dashboard

Overall score: **0%**

1 -

Question 59 of 280

□ □

A 24-year-old female presents with one week of progressive and persistent double vision. She reports increasing tiredness at all times of day over the past 2 months and occasional chest tightness associated with palpitations. She has no past medical history. She was also adopted and unaware of any family history. On examination, you find a loss of left eye abduction, right eye upwards gaze, right eye adduction. Systemic examination also reveals bilateral clammy hands and a heart rate of 120 per minute, irregular. Which test is most likely to be diagnostic?

	Autoimmune screen
	Thyroid function tests
	CT thorax
	Anti-acetylcholine receptor antibodies
	12 lead ECG

Dashboard

Overall score: 0%

1 -

Question 59 of 280

□ □

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	Autoimmune screen
	Thyroid function tests
	CT thorax
	Anti-acetylcholine receptor antibodies
	12 lead ECG

Dashboard

Overall score: **0%**

1 -

□ Question 60 of 280



A 65-year-old man was referred to neurology outpatient clinic with a six month history of double vision. He had first noticed this when reading before going to bed but had more recently been occurring earlier during the day whenever the patient concentrated on an activity. The patient's wife also reported that she had been struggling to hear the patient when he spoke to her and that on several occasions the patient's eyelids had drooped during late in the day. The patient denied experiencing any weakness in his arms or legs but stated that his general mobility was normally very limited due to osteoarthritis of both his knees. Other past medical history included hypercholesterolaemia, hypertension and diverticular disease. Regular medications included bendroflumethiazide 2.5 mg OD, simvastatin 40 mg OD, co-dydramol as required. The patient was a retired builder and lived alone with his wife. He was an ex-smoker who rarely consumed alcohol.

Examination showed normal pupillary reflexes, visual acuity and visual fields. No ptosis was observed. Assessment of eye movements demonstrated a complex ophthalmoplegia with diplopia in all directions of gaze. There was significant weakness of bilateral facial muscles with bilateral involvement of the forehead. Examination of the tongue and palate was normal. Peripheral nerve examination was unremarkable except for evidence of fatiguable muscle weakness in the upper limbs.

Chest x-ray: clear lung fields with no effusion; no cardiomegaly; possible mediastinal widening

Haemoglobin	13.5 g / dL
White cell count	$8.9 \times 10^9/l$
Platelets	$409 \times 10^9/l$
Urea	4.7 mmol / L
Creatinine	95 micromol / L
Sodium	137 mmol / L
Potassium	4.8 mmol / L
Calcium (adjusted)	2.5 mmol / L

What is the single most sensitive investigation for the likely diagnosis?

	Repetitive nerve stimulation neurophysiology
	Serum acetylcholine receptor antibodies
	Serum muscle specific tyrosine kinase antibodies
	CT mediastinum
	Single fibre electromyography

Dashboard

Overall score: **0%**

1 -

□ Question 60 of 280



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	Single fibre electromyography

Dashboard

Overall score: **0%**
1 -

□ Question 61 of 280



A 55 year old man presents to the Accident and Emergency department and a medical referral is requested. He reports that for the past week he has been hearing voices. He states that he cannot recognise who the voices are as they are whispering quietly but he thinks that they are making derogatory comments about him. He denies any visual hallucinations and you cannot illicit any delusional beliefs. His mood appears euthymic.

He tells you that he has a long history of alcohol dependence lasting for 30 years drinking approximately 10 units of alcohol a day on average. He tells you that in the past he has tried to stop drinking alcohol but this has caused admission to hospital due to seizures. He is particularly worried because he has cut down on alcohol since the hallucinations because he is worried that he is going mad. He is now only drinking 2 units a day and has not drunk any alcohol for 24 hours. On one previous occasion where he abstained from alcohol he said that he had hallucinations and had to be admitted to hospital for a few days and put on a drip and was told that he almost died.

Na ⁺	144 mmol/l
K ⁺	3.6 mmol/l
Urea	14.1 mmol/l
Creatinine	119 µmol/l

Bilirubin	36 µmol/l
ALP	199 u/l
ALT	92 u/l
γGT	271 u/l
Albumin	36 g/l

He has a family history of alcohol dependence and depression but no other psychiatric problems. His medications include Omeprazole, Vitamin B, Thiamine and Diazepam.

On examination his GCS is 15, there is no tremor or sweating Pulse 80 regular BP 138 / 74 chest clear, abdo soft non tender, no peripheral focal neurology MMSE 28/30 He is commenced on chlordiazepoxide and observed for 24 hours. His GCS remains at 15 and his repeat physical examination remains unchanged and the hallucinations are still present

What is the most likely diagnosis?

	Late onset schizophrenia
	Delerium tremens
	Alcohol withdrawal syndrome
	Alcoholic hallucinosis
	Hepatic encephalopathy grade 2

Dashboard

Overall score: 0%

1 -

□ Question 61 of 280



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Dashboard

Overall score: 0%

1 -

Question 62 of 280

□ □

A 14-year-old presents to your neurology clinic reporting 9 months of subtle and gradual onset, progressive lower limb weakness. For the past 18 months, he has noticed a difficulty in keeping up with his peers in PE lessons, which he initially put down to 'not being very sporty'. However, he feels weak whenever he walks and has particular difficulty getting up from a chair.

On examination, you notice significantly hypertrophied calves on inspection. Formal examination of power reveals 4- out of 5 bilaterally in shoulder abduction, adduction and normal 5 out of 5 distally. 4- out of 5 is also noted in hip flexion and extension, 4+ in knee flexion and extension, 5 out of 5 in ankle plantar and dorsiflexion. The weaknesses demonstrated are not fatiguable and are persistent. Reflexes are present in all areas, plantars are downgoing. He has no other past medical history. His family history is unknown as he was adopted. What is the most likely diagnosis?

	Duchenne muscular dystrophy
	Becker muscular dystrophy
	McArdle syndrome
	Spinal muscular atrophy
	Inclusion body myositis

Dashboard

Overall score: 0%

1 -

Question 62 of 280

□ □

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Dashboard

Overall score: **0%**

1 -

Question 63 of 280

A 23 year-old student with epilepsy presents with generalised tonic-clonic status epilepticus. He is already taking phenytoin. Despite intravenous administration of diazepam and then phenobarbital, he is still fitting after 30 minutes.

What is the best course of action?

<input type="checkbox"/>	Check phenytoin levels and reload if necessary
<input type="checkbox"/>	Send urine for toxicology
<input type="checkbox"/>	Organise brain imaging
<input type="checkbox"/>	Obtain an electroencephalogram (EEG)
<input type="checkbox"/>	Induction of general anaesthesia with thiopentone

Dashboard

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1 -

Question 63 of 280

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Dashboard

Overall score: **0%**

1 -

Question 64 of 280

□ □

A 30-year-old man who has been seriously assaulted is brought to the Emergency Department. His GCS is 5/15 on arrival and he is immediately intubated and transferred for a CT head (with contrast):



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Which blood vessel(s) is most likely to have ruptured?

	Anterior communicating artery
	Emissary veins
	Temporal artery
	Middle meningeal artery
	Posterior communicating artery

Dashboard

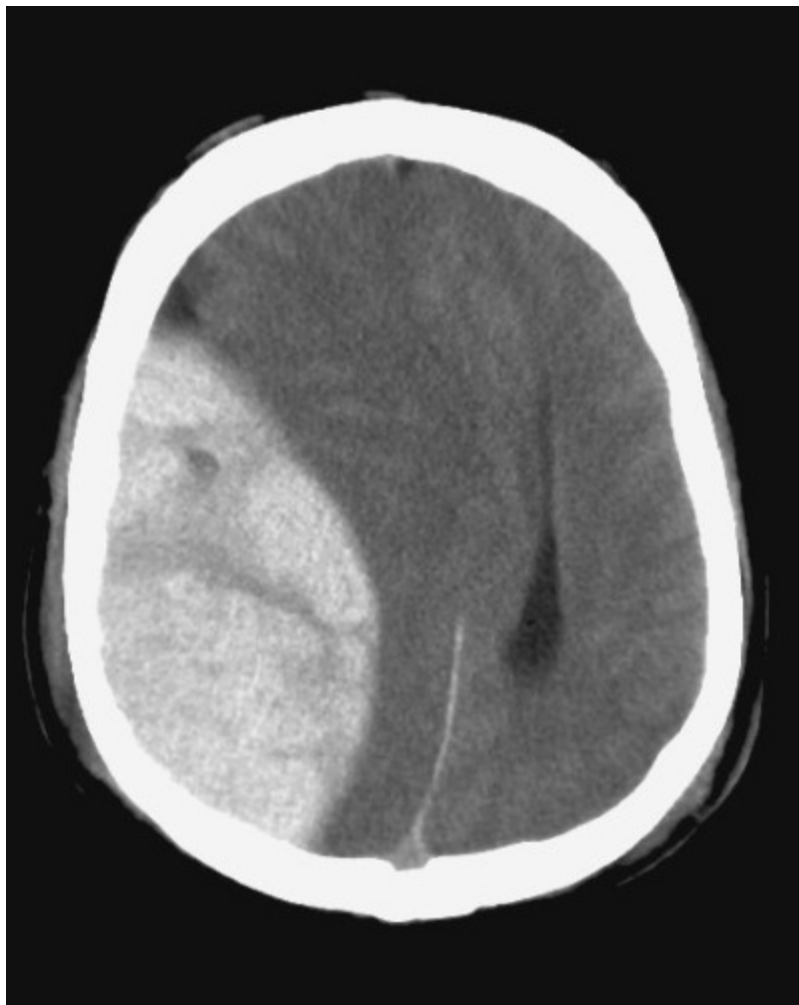
Overall score: **0%**

1 -

□ Question 64 of 280

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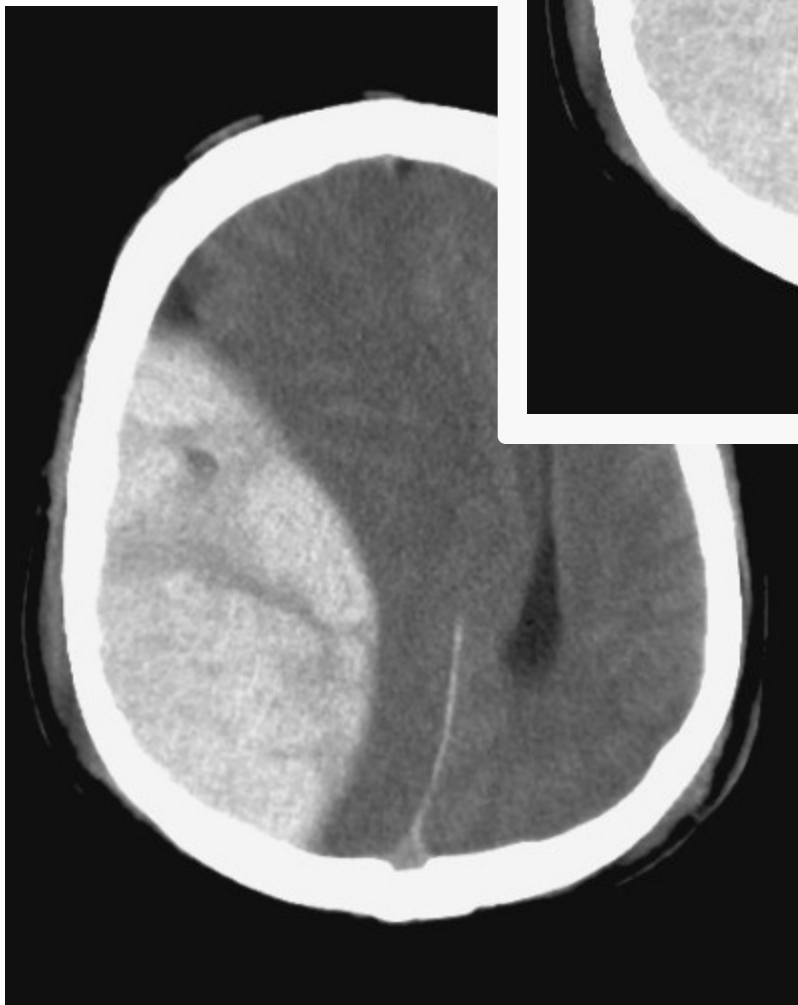
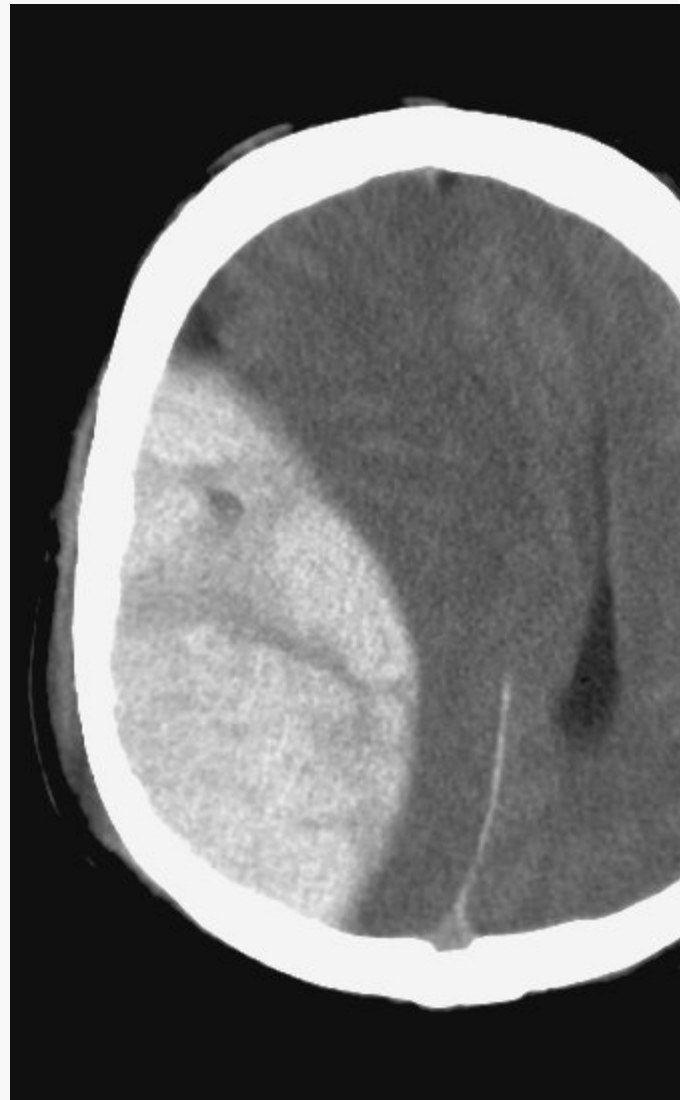
Overall score: 0%

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□ Question 64 of 280

A 30-year-old man who has been seriously assaulted is brought to hospital on arrival and he is immediately intubated and transferred for a CT head.



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Dashboard

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1 -

□ Question 64 of 280

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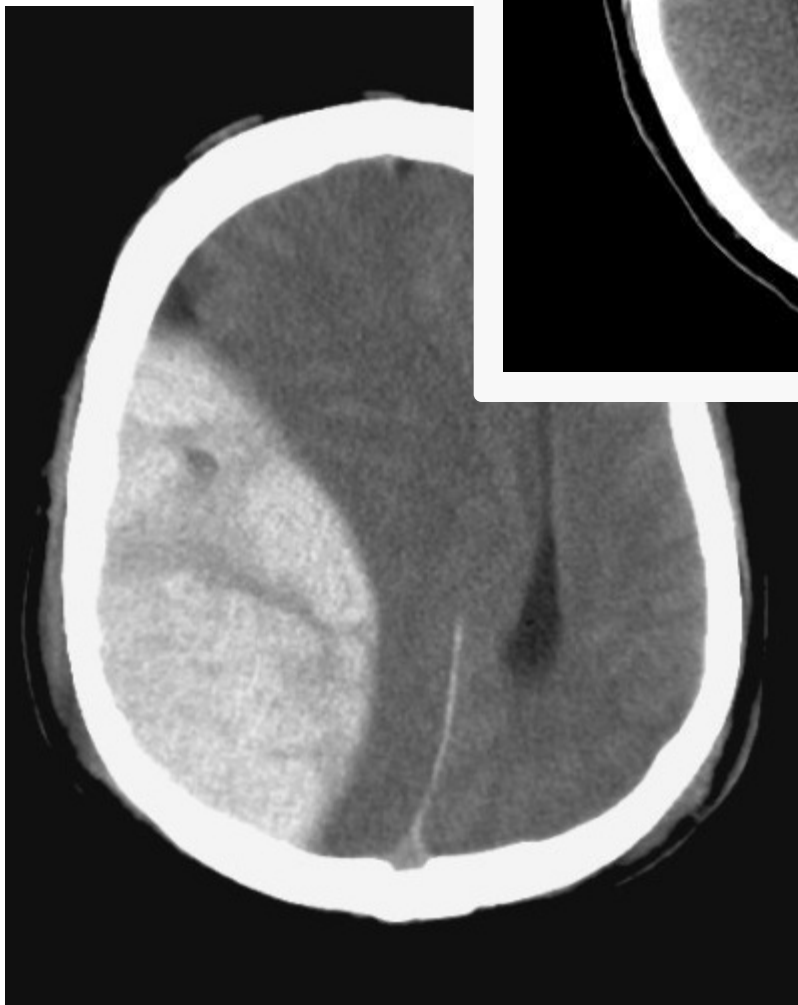
Overall score: **0%**

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□ Question 64 of 280

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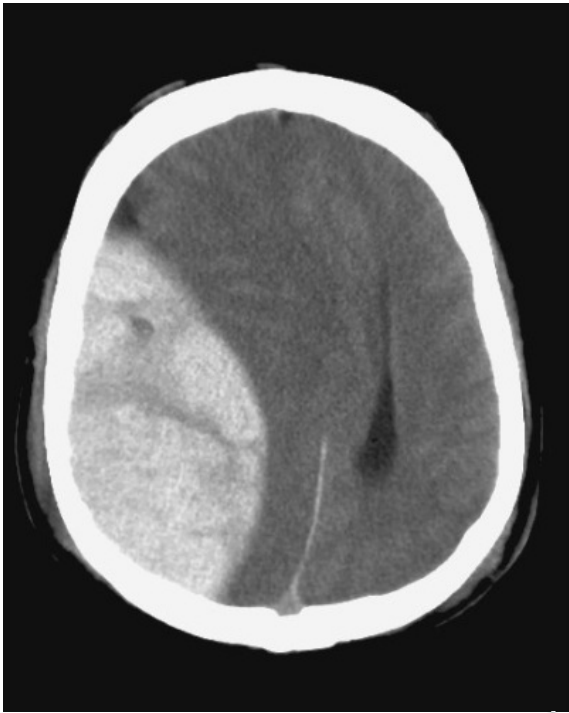
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1 -

Question 64 of 280



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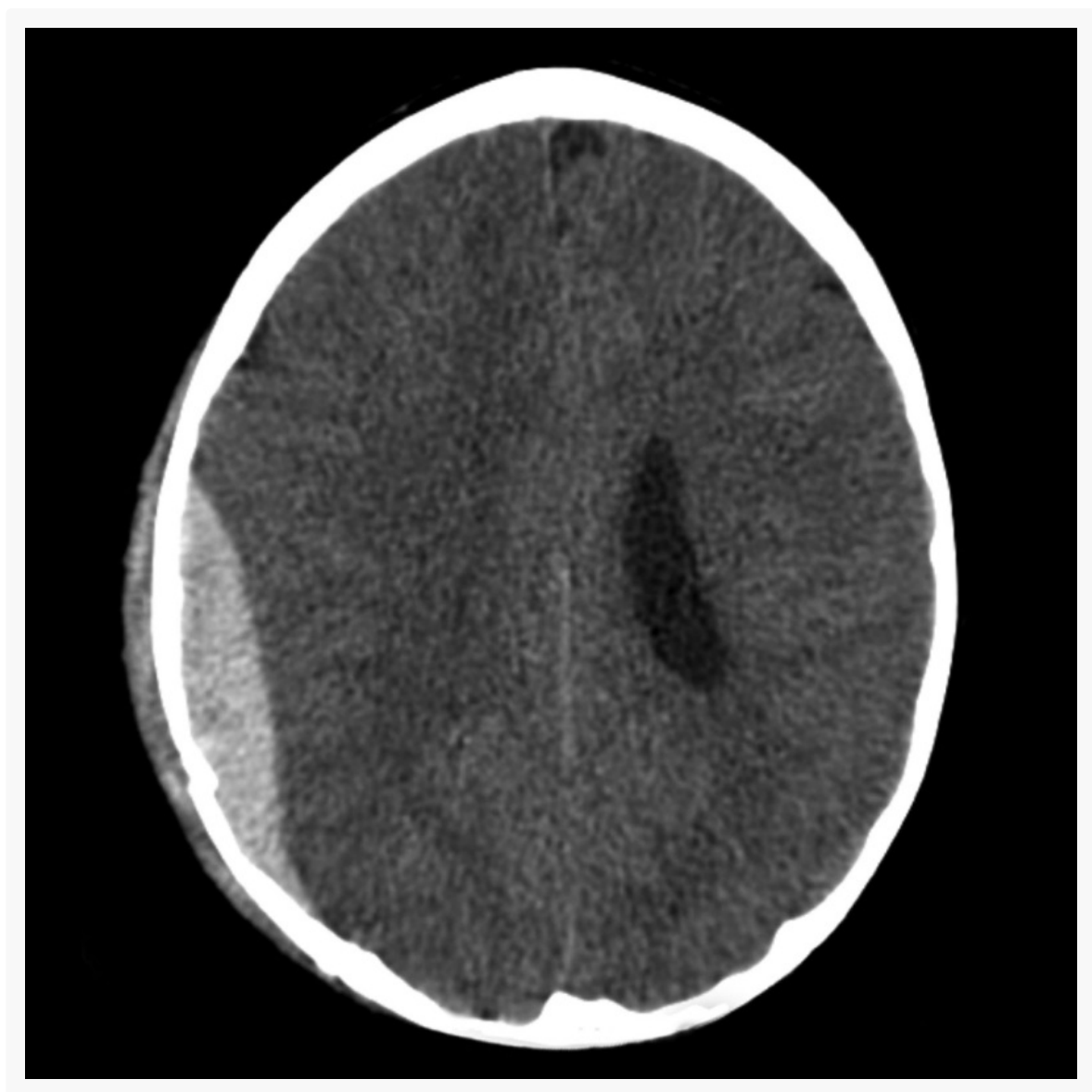
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Question 64 of 280



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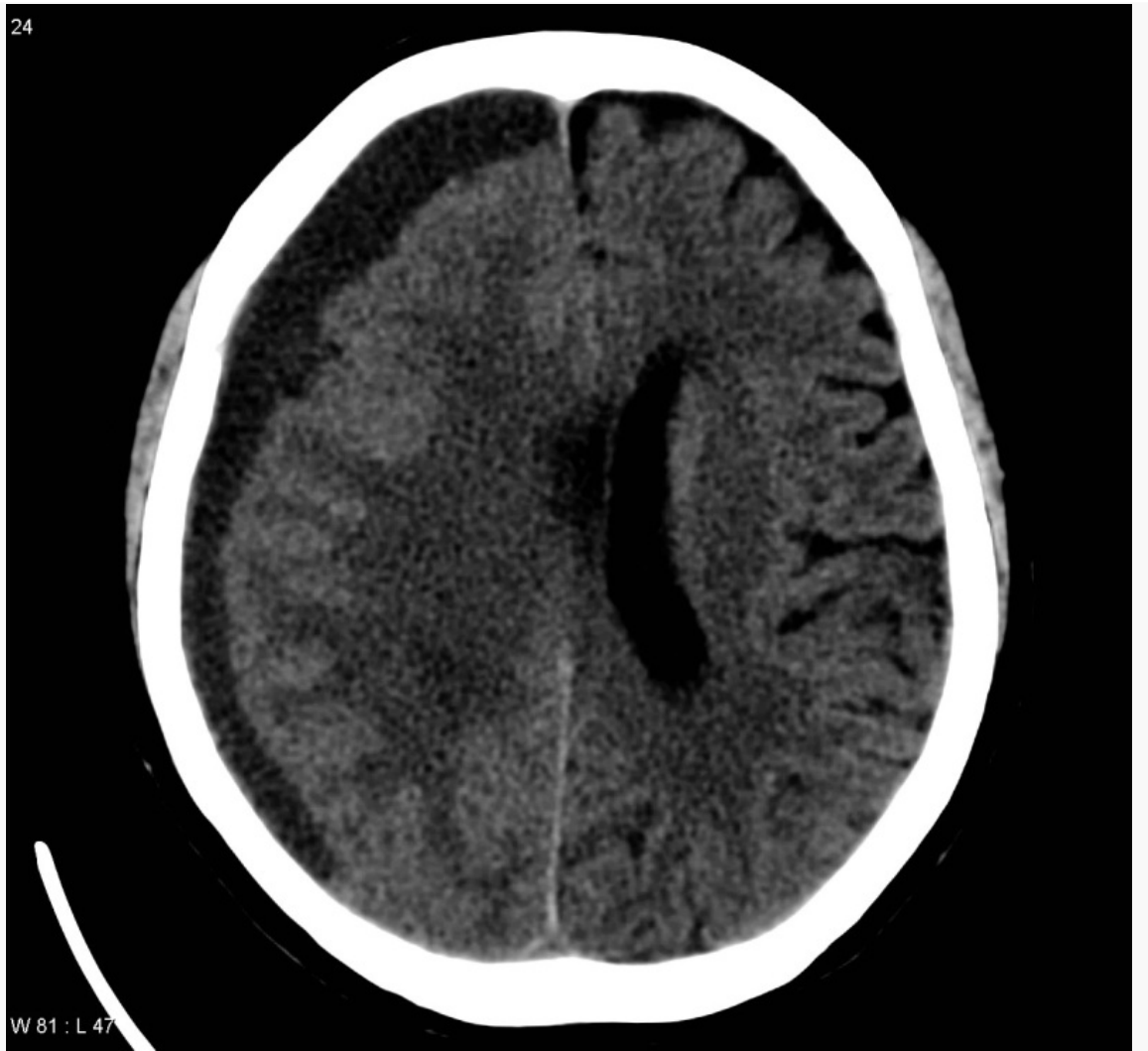
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Dashboard

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□ Question 64 of 280

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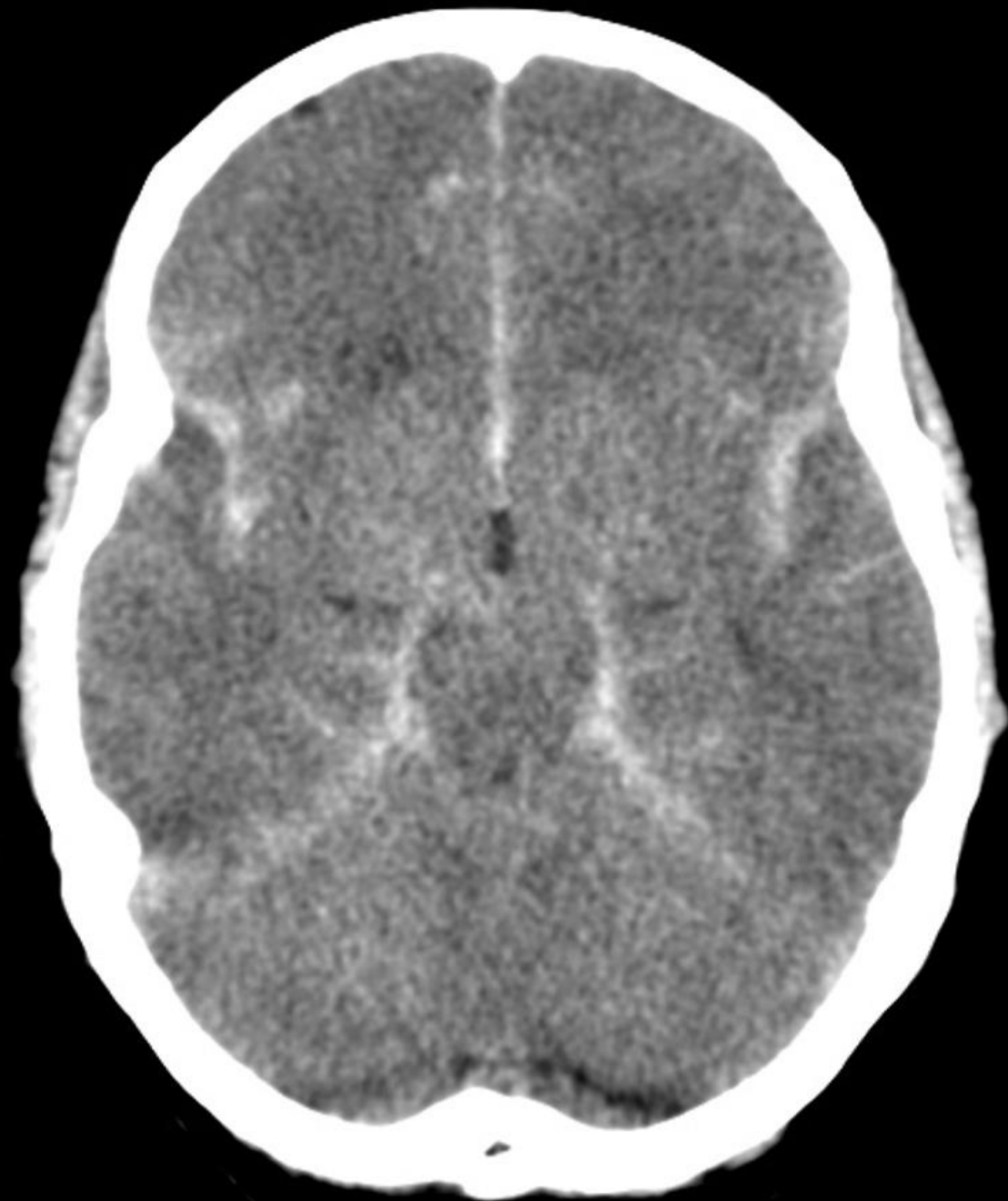
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	Middle meningeal artery
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Dashboard

Overall score: **0%**

1 -



□ Question 65 of 280

□ □

A 65 year old lady was referred to the neurology clinic for assessment. She reported a 3 month history of progressive weakness. She had initially noticed difficulty opening jars, but reported that over the past month she had also had difficulty walking up stairs. She did not have any pain, and reported no changes in sensation. Past medical history included osteoporosis, type 2 diabetes mellitus and hypertension.

On neurological examination there were no fasciculations, tone was normal and sensation was intact. Power was reduced in finger flexion (3/5), wrist flexion (4/5), knee extension (3/5) and hip flexion (4/5) bilaterally. Other movements were relatively spared. Upper limb reflexes were present but diminished, but the knee jerk was absent. The plantar response was flexor bilaterally. There was no tenderness over any muscle groups. Cranial nerve examination was unremarkable.

Blood results are shown below:

Haemoglobin	122 g/l
White cell count	$8.2 \times 10^9/l$
Platelets	$376 \times 10^9/l$
C reactive protein	7 mg/l
Erythrocyte sedimentation rate	39 mm/hr
Creatine kinase	272 (24-170 U/l)

What is the most likely diagnosis?

	Diabetic amyotrophy
	Inclusion body myositis
	Motor neuron disease
	Myaesthesia gravis

Dashboard

Overall score: 0%

1 -

□ Question 65 of 280



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	Diabetic amyotrophy
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	Motor neuron disease
	Myasthenia gravis

Dashboard

Overall score: **0%**

1 -

Question 66 of 280



A 45 year old Bangladeshi male presents with a 6 month history of bilateral reduced sensation on the tips of both his feet, which has gradually progressed on both legs to his low shins. His past medical history include type 2 diabetes, diagnosed 7 years ago and reports good medication compliance with metformin 500mg BD alone, with a HbA1c at 6.5mmol/l two weeks ago. He is also currently on his ninth month of anti-tuberculosis treatment, having initially presented with a chronic cough, night sweats and weight loss. An induced sputum subsequently cultured positive for acid fast bacilli. He did not bring in his medications but remembers being told they are 'the standard four then two drugs'. He takes no other medications and has no known drug allergies. On examination, tone, power and gait of his lower limbs are unremarkable. He demonstrates reduced sensation to light touch to his left lower-shin and right mid-shin. Ankle jerks are absent bilaterally, plantars are downgoing bilaterally. What is the most likely diagnosis?

	Guillain-Barre syndrome (GBS)
	Chronic inflammatory demylinating polyneuropathy (CIDP)
	Drug induced peripheral neuropathy
	Diabetic neuropathy
	Diabetic amyotrophy

Dashboard

Overall score: 0%

1 -

Question 66 of 280



A 45 year old Bangladeshi male presents with a 6 month history of bilateral reduced sensation on the tips of both his feet, which has gradually progressed on both legs to his low shins. His past medical history include type 2 diabetes, diagnosed 7 years ago and reports good medication compliance with metformin 500mg BD alone, with a HbA1c at 6.5mmol/l two weeks ago. He is also currently on his ninth month of anti-tuberculosis treatment, having initially presented with a chronic cough, night sweats and weight loss. An induced sputum subsequently cultured positive for acid fast bacilli. He did not bring in his medications but remembers being told they are 'the standard four then two drugs'. He takes no other medications and has no known drug allergies. On examination, tone, power and gait of his lower limbs are unremarkable. He demonstrates reduced sensation to light touch to his left lower-shin and right mid-shin. Ankle jerks are absent bilaterally, plantars are downgoing bilaterally. What is the most likely diagnosis?

	Guillain-Barre syndrome (GBS)
	Chronic inflammatory demylinating polyneuropathy (CIDP)
	Drug induced peripheral neuropathy
	Diabetic neuropathy
	Diabetic amyotrophy

Dashboard

Overall score: 0%

1 -

Question 67 of 280

□ □

A 57 year old gentleman was brought to the emergency department by ambulance following a collapse 2 hours earlier. His partner witnessed him fall to the floor, and stated that he had not been moving his right arm and leg since. She said that he had been well before this episode. The ambulance crew reported that he had had a generalised tonic-clonic seizure, which was terminated after 6 minutes with 5mg of diazepam. On examination he was drowsy, with a Glasgow coma score of 10 out of 15, and his blood pressure was 165/92mmHg. He had a right sided facial droop and there was no movement in his right arm or leg. He was known to be a smoker, and he took amlodipine for hypertension. He was not on any other medications.

An urgent CT head scan was performed immediately which demonstrated loss of differentiation between the grey and white matter in the left frontal and parietal lobes, but no acute haemorrhage.

What is the most appropriate initial management?

	Aspirin 300mg for 2 weeks
	Intravenous alteplase 900 micrograms/kg
	Aspirin + dipyridamole 25/200mg
	Clopidogrel 75mg
	Warfarin

Dashboard

Overall score: 0%

1 -

Question 67 of 280

□ □

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	Intravenous alteplase 900 micrograms/kg
	Aspirin + dipyridamole 25/200mg
	Clopidogrel 75mg
	Warfarin

Dashboard

Overall score: **0%**

1 -

Question 68 of 280

□ □

An 86-year-old man is brought in by ambulance following suspicion of a stroke. His wife noticed sudden right-sided weakness. He describes sudden onset of weakness with no preceding symptoms. He has a past medical history of hypertension, diabetes and glaucoma. On examination, he has right sided pyramidal weakness of the arm and leg with associated sensory loss as well as reduced tone. His left side is normal. Cranial nerve examination shows homonymous hemianopia but is otherwise normal. What is the most likely diagnosis?

	Total anterior circulation stroke
	Partial anterior circulation stroke
	Lacunar stroke
	Posterior circulation stroke
	Brainstem stroke

Dashboard

Overall score: 0%

1 -

Question 68 of 280

An 86-year-old man is brought in by ambulance following suspicion of a stroke. His wife noticed sudden right-sided weakness. He describes sudden onset of weakness with no preceding symptoms. He has a past medical history of hypertension, diabetes and glaucoma. On examination, he has right sided pyramidal weakness of the arm and leg with associated sensory loss as well as reduced tone. His left side is normal. Cranial nerve examination shows homonymous hemianopia but is otherwise normal. What is the most likely diagnosis?

	Total anterior circulation stroke
	Partial anterior circulation stroke
	Lacunar stroke
	Posterior circulation stroke
	Brainstem stroke

Dashboard

Overall score: **0%**

1 -

Question 69 of 280

□ □

A 60 year old male presents to his neurology follow up clinic after being diagnosed with motor neurone disease 6 months ago. Unfortunately, he reports increasing immobility since his diagnosis. While he was working full-time as a lawyer 6 months ago, he is now mostly bedbound and his wife has become his full-time carer. He was initially started on riluzole but this was topped 2 months ago after his blood tests revealed a liver transaminitis, likely secondary to riluzole. He is seeing you in clinic for an alternative treatment but is only interested in therapeutics that will prolong his life. What can you offer him?

	Intravenous immunoglobulins
	Oral prednisolone
	Respiratory physiotherapy
	Non-invasive ventilation
	Pneumococcal and influenza vaccinations

Dashboard

Overall score: 0%

1 -

□ Question 69 of 280

□ □

A 60 year old male presents to his neurology follow up clinic after being diagnosed with motor neurone disease 6 months ago. Unfortunately, he reports increasing immobility since his diagnosis. While he was working full-time as a lawyer 6 months ago, he is now mostly bedbound and his wife has become his full-time carer. He was initially started on riluzole but this was topped 2 months ago after his blood tests revealed a liver transaminitis, likely secondary to riluzole. He is seeing you in clinic for an alternative treatment but is only interested in therapeutics that will prolong his life. What can you offer him?

	Intravenous immunoglobulins
	Oral prednisolone
	Respiratory physiotherapy
	Non-invasive ventilation
	Pneumococcal and influenza vaccinations

Dashboard

Overall score: **0%****1** -

□ Question 70 of 280



A 58-year-old female is brought into hospital by her husband with recurrent falls associated with cognitive decline noted by her husband over the past 8 weeks. The patient's husband reports a possible cough and cold about 3 months ago, during which she took 2 days off work as a personal assistant to a FTSE 100 company CEO but otherwise has no significant past medical history, is a non-smoker and drinks minimal alcohol.

On examination, she is alert and orientated to time and place but appears easily startled every time you start a sentence. You note significant bilateral finger-nose and heel-shin dysmetria, mild postural tremor and mild speech slurring. The remainder of her neurological examination was unremarkable.

Her blood tests are as follows:

Hb	124 g/l
Platelets	$282 \times 10^9/l$
WBC	$4.8 \times 10^9/l$

Na ⁺	143 mmol/l
K ⁺	4.7 mmol/l
Urea	6.7 mmol/l
Creatinine	86 μ mol/l
CRP	3 mg/l
TSH	8.0 mu/l
Free T4	12.0 pmol/l
Anti-TPO	negative
HIV	negative
Glucose	6.5 mmol/l

A lumbar puncture was performed with results as follows:

WCC	<1 /mm ³
RBC	28 /mm ³
Protein	0.71 g/l
Glucose	3.4 mmol/l
Culture	no organisms grown
Viral PCR	awaited
Cytology	awaited
14-3-3	positive

An EEG demonstrated brief periodic spikes but these were not correlated with any seizure activity clinically. An MRI head demonstrated no parenchymal abnormalities except mildly increased signal in the cortical sulci.

What is the most likely diagnosis?

	Creutzfeldt-Jakob disease
	Viral encephalitis
	Acute disseminated encephalomyelitis (ADEM)
	Progressive multifocal leucoencephalopathy (PML)
	Hashimoto's encephalopathy

Dashboard

Overall score: 0%

1 -

□ Question 70 of 280



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Dashboard

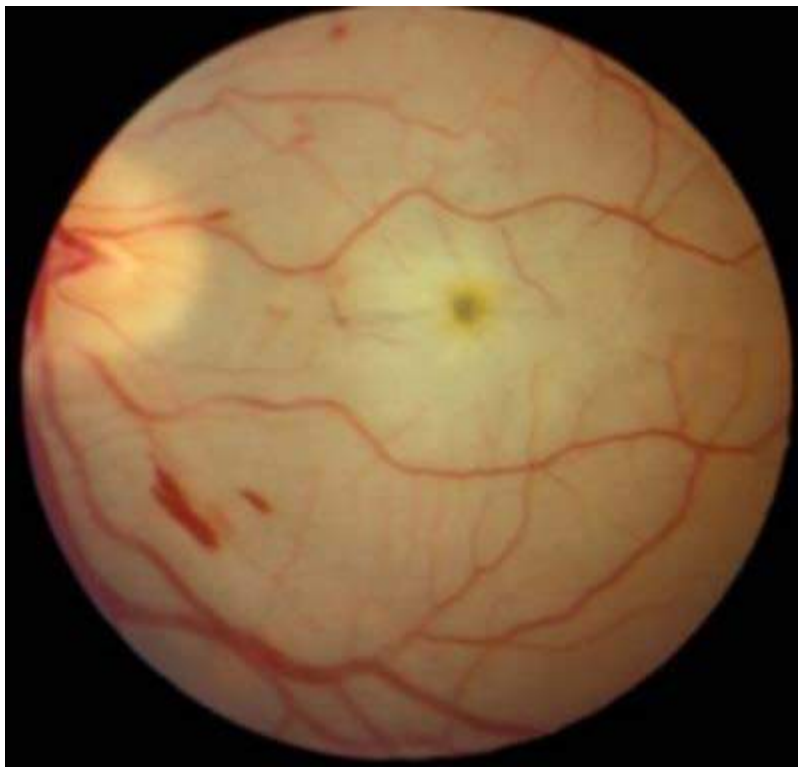
Overall score: 0%

1 -

□ Question 71 of 280

□ □

This man presents with unilateral visual loss. On examination he has a relative afferent pupillary defect. Fundoscopy shows the following:



What is the most likely diagnosis?

	Central retinal vein occlusion
	Subhyaloid haemorrhage
	Solar retinopathy

	Central retinal artery occlusion
	Optic neuritis

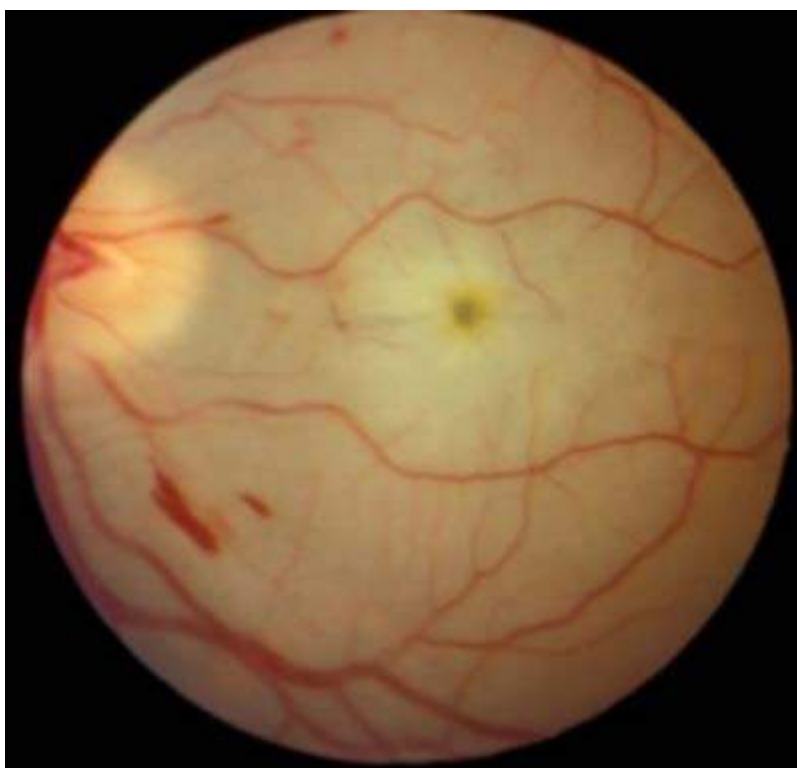
Dashboard

Overall score: **0%**

1 -

Question 71 of 280

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What is the most likely diagnosis?

<input type="radio"/>	Central retinal vein occlusion
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<input type="radio"/>	Solar retinopathy
<input type="radio"/>	

	Central retinal artery occlusion
	Optic neuritis

Dashboard

Overall score: **0%**
1 -

Question 72 of 280

□ □

A 26-year-old female from the travelling community presents to A&E following a seizure. History from her family suggests that she was suffering with headaches over the last 24 hours and this morning was feverish and vomiting. Her partner says she was unwell 1 month ago with a fever and whole body rash that spontaneously resolved. There is no other significant past medical history.

On examination she appears drowsy. She has a left sided hemiparesis with bilateral nystagmus. Fundoscopy reveals papilloedema. There are no skin rashes.

What is the most likely underlying diagnosis?

	Meningococcal septicaemia
	Meningitis secondary to herpes simplex virus
	Progressive multifocal leukoencephalopathy (PML)
	Multiple sclerosis
	Acute disseminated encephalomyelitis (ADEM)

Dashboard

Overall score: 0%

1 -

Question 72 of 280

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What is the most likely underlying diagnosis?

<input checked="" type="checkbox"/>	Meningococcal septicaemia
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<input type="checkbox"/>	Progressive multifocal leukoencephalopathy (PML)
<input type="checkbox"/>	Multiple sclerosis
<input checked="" type="checkbox"/>	Acute disseminated encephalomyelitis (ADEM)

Dashboard

Overall score: **0%**

1 -

□ Question 73 of 280



A 43-year-old female presents with a second episode of loss of sensation in her left anterior thigh and right foot. This is her second episode within the past four months. She had recently reported an episode of left anterior shin numbness 1 year ago when an MRI with gadolinium demonstrated 'spots in her spinal cord' and she was diagnosed with transverse myelitis. Her past medical history also includes ulcerative colitis, diagnosed aged 27 years old and primary sclerosing cholangitis. Her serum tests are as follows:

Hb	125 g/l
Platelets	$274 \times 10^9/l$
WBC	$7.5 \times 10^9/l$

Na ⁺	139 mmol/l
K ⁺	4.4 mmol/l
Urea	4.7 mmol/l
Creatinine	78 μ mol/l
Bilirubin	49 μ mol/l
ALP	305 u/l
ALT	180 u/l

You commence five days of high dose oral methylprednisolone. What is the most appropriate next management?

	Interferon beta
	Glatiramer acetate
	Fingolimod

	Natalizumab
	Mitoxantrone

Dashboard

Overall score: **0%**
1 -

□ Question 73 of 280



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	Interferon beta
	Glatiramer acetate
	Fingolimod

	Natalizumab
	Mitoxantrone

Dashboard

Overall score: **0%**
1 -

Question 74 of 280



A 78-year-old man is admitted following being found on the floor at home. He has no recollection of how he got to floor or how long he had been there. He reports feeling generally unwell and having a cough for a number of days. There is no medical history of note and he takes no regular medications. He lives alone and appears unkempt. Examination reveals bronchial breathing throughout his left mid zone. Neurologically, he has new onset weakness of left sided shoulder abduction and adduction, alongside mild weakness in left elbow flexion. Additionally, reduced sensation in the lateral aspect of his upper arm is noted. A CT head is undertaken.

CT head report	Age related involutional change. No evidence of intracranial haemorrhage or recent ischaemic event.
----------------	---

What is the most likely diagnosis?

	Stroke
	Rotator cuff tear
	Brachial plexus injury
	Brown-Sequard syndrome
	Botulism

Dashboard

Overall score: 0%

1 -

Question 74 of 280



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CT head report	Age related involutional change. No evidence of intracranial haemorrhage or recent ischaemic event.
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What is the most likely diagnosis?

	Stroke
	Rotator cuff tear
	Brachial plexus injury
	Brown-Sequard syndrome
	Botulism

Dashboard

Overall score: 0%

1 -

Question 75 of 280



A 45-year-old female presents with small multiple ischaemic infarcts in the right cerebellar hemisphere confirmed on MRI, associated with small haemorrhages within two areas of infarct. A subsequent CT angiogram 24 hours into the admission demonstrated a right vertebral artery dissection with a free flowing thrombus visualised. What is the optimal management?

<input type="checkbox"/>	IV heparin infusion
<input type="checkbox"/>	300mg aspirin 14 days followed by clopidogrel 75mg
<input type="checkbox"/>	Load with warfarin
<input type="checkbox"/>	Treatment dose low molecular heparin
<input type="checkbox"/>	Hold off antiplatelet and anticoagulation

Dashboard

Overall score: **0%**

1 -

□ Question 75 of 280

□ □

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	Load with warfarin
	Treatment dose low molecular heparin
	Hold off antiplatelet and anticoagulation

Dashboard

Overall score: **0%**

1 -

Question 76 of 280

□ □

A 45-year-old lady has had weight loss over the last eight months. Over the last 3 months, she has become confused according to her family, forgetting things she would normally remember like telephone numbers or what she did during the day. She has now presented with a second episode of what sounds like a generalised tonic-clonic seizure in the last week. She has no other past medical history of note. Clinical examination shows MMSE of 23/30, cachexia, a bulky left adnexal region, and nil else. Routine blood tests are unremarkable. You organise a CT chest, abdomen, pelvis and head which reveal a suspicious lesion in the left ovary but are otherwise normal. You organise a biopsy of the left ovary, send off a paraneoplastic blood screen, and order an MRI of the brain. What would you expect the paraneoplastic screen to return showing?

	Voltage-gated potassium channel antibodies
	Anti-Hu antibodies
	Anti-GAD
	Anti-Ma2 antibodies
	NMDA receptor antibodies

Dashboard

Overall score: 0%

1 -

Question 76 of 280

□ □

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	Anti-Hu antibodies
	Anti-GAD
	Anti-Ma2 antibodies
	NMDA receptor antibodies

Dashboard

Overall score: **0%**

1 -

□ Question 77 of 280

□ □

You receive a call from a GP in the community. A 65 year old female patient who was diagnosed with generalised myasthenia gravis six years ago and last reviewed in neurology outpatients 6 weeks ago reports no improvements in her neck weakness, voice weakness and fatigue. In the neurology clinic, her dose of pyridostigmine was increased from 90mg QDS to 120mg QDS. She does not appear acutely unwell but complains that her life is significantly affected by her symptoms. She has no other past medical history. On examination by her GP, she has no respiratory distress and able to swallow salivary secretions normally. What is your advice?

	Increase pyridostigmine to 150mg QDS
	Start prednisolone 60mg in community, neurology to follow up in 8 weeks as outpatient
	Start azathioprine in community, neurology to follow up in 8 weeks as outpatient
	Admit to hospital, start oral prednisolone in hospital
	Admit to hospital, start intravenous immunoglobulin in hospital

Dashboard

Overall score: 0%

1 -

Question 77 of 280

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	Admit to hospital, start oral prednisolone in hospital
	Admit to hospital, start intravenous immunoglobulin in hospital

Dashboard

Overall score: **0%**

1 -

Question 78 of 280

□ □

A 62 year-old man with a history of osteoarthritis, type II diabetes and mild dementia is seen in neurology clinic. He has a 2 month history of weakness in his right arm. He has also noticed that his voice has become softer. He is finding it hard to use door handles and open jars. On two occasions his wife has noticed him stumbling whilst walking.

On examination he has fasciculations over his right deltoid muscle and wasting of the interossei muscles of the right hand. There is 4/5 strength in right shoulder abduction on the Medical Research Council (MRC) scale. Limb reflexes are absent in the right arm but detectable elsewhere. Coordination is normal. Sensation is normal and Romberg's test is negative.

What is the most likely diagnosis?

	Compressive Cervical myelopathy
	Diabetic peripheral neuropathy
	Motor neurone disease
	Multiple sclerosis
	Thoracic outlet syndrome

Dashboard

Overall score: 0%

1 -

□ Question 78 of 280

□ □

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What is the most likely diagnosis?

	Compressive Cervical myelopathy
	Diabetic peripheral neuropathy
	Motor neurone disease
	Multiple sclerosis
	Thoracic outlet syndrome

Dashboard

Overall score: **0%****1** -

Question 79 of 280

□ □

You are asked for advice on a 57 year old man who presented to primary care 12 weeks after an inferior myocardial infarction. He has had symptoms of persistent low mood that varies during the day, tearfulness and hopelessness. He has lost 6kg of weight in the past 3 months and his BMI is currently 19. He has fleeting thoughts of suicide but would not act on this as he does not want to hurt his family. You are told that 20 years ago, following an overdose of paracetamol, he was prescribed Citalopram and diagnosed with depression.

The GP tells you that other than the recent MI, he also has a diagnosis of Atrial Fibrillation, for which he is on warfarin and he has suffered from epigastric pain for the past 2 years. He had an OGD 1 year ago where treatment of a duodenal ulcer with adrenaline was required. Since then his symptoms of epigastric pain have decreased but are still present. There has been no repeat OGD.

What would be the safest course of action?

	Prescribe Phenelzine
	Prescribe Sertraline
	Prescribe Mirtazepine
	Prescribe Imipramine
	Refer for 2 month wait CBT

Dashboard

Overall score: 0%

1 -

□ Question 79 of 280

□ □

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	Refer for 2 month wait CBT

Dashboard

Overall score: 0%

1 -

Question 80 of 280

□ □

You see a 46 year-old man who has been referred by his GP to the neurology clinic.

He gives a one year history of facial pain. The pain particularly comes on when he is shaving or brushing his teeth, and he describes it as 'stabbing' through the teeth of his upper jaw and over the left side of his face. He has seen a succession of dentists and had several teeth removed, with no relief. The pain has been getting progressively worse, and whereas before it occurred in discrete attacks, it now occurs almost all the time. He has read several online sources and has become convinced that he has a brain tumour, which has led to him becoming depressed and withdrawn.

His past medical history includes essential hypertension, for which he takes perindopril. He also suffers from sinusitis, and has had a sinus washout on more than one occasion. Two years ago whilst on a business trip abroad he had a problem with the vision in his right eye, which spontaneously resolved over a few weeks, and for which he sought no treatment.

General examination is unremarkable. Cranial nerve examination is largely normal but you notice that there is a patch of numbness over the left cheek. Power is 5/5 across all muscle groups in the limbs, reflexes are normal, and plantars are downgoing. Sensation in the limbs is normal.

What is the most appropriate course of action?

	Reassure him he has trigeminal neuralgia, for which unfortunately there is no treatment
	Reassure him he has trigeminal neuralgia, and start carbamazepine 300mg daily
	Refer to the neurosurgeons for microvascular decompression
	Perform MR head with gadolinium contrast
	Perform CT head with contrast

Overall score: **0%**

1 -

Question 80 of 280

□ □

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Overall score: **0%**

1 -

Question 81 of 280

□ □

A 73 year old female presents with a low frequency irregular tremor of the left hand and ataxia. The tremor is present at rest and when she holds her arms outstretched. The frequency of the tremor ranges from 3-4 Hz and is enhanced with posture and aggravated with movement. On neurological examination patient was found to have an ataxic gait with mild left arm weakness (power 4/5). She had a past medical history of type 2 diabetes mellitus, hypertension and previous stroke. What is the most likely diagnosis for her tremor?

	Essential tremor
	Holmes tremor
	Parkinsonian tremor
	Cerebellar tremor
	Physiological tremor

Dashboard

Overall score: 0%

1 -

Question 81 of 280

□ □

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Dashboard

Overall score: **0%**

1 -

Question 82 of 280



A 16 year old boy is brought in to A&E by his mother after an episode of unresponsiveness while walking, lasting transiently for seconds before fully resolving. He has no recollection of these episodes. He was diagnosed with absence seizures aged 11 and was previously prescribed anti-epileptics. These had been gradually weaned off two years ago by his neurologists following a 3 year seizure-free period.

Over the past 48 hours, he has now had 4 of his typical absences. You decide to prescribe an anti-epileptic. Which anti-epileptic should you avoid?

	Carbamazepine
	Sodium valproate
	Lamotrigine
	Levetiracetam
	No contraindications

Dashboard

Overall score: 0%

1 -

Question 82 of 280



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	Carbamazepine
	Sodium valproate
	Lamotrigine
	Levetiracetam
	No contraindications

Dashboard

Overall score: 0%
1 -

Question 83 of 280



A 28 year old female psychiatric nurse presents to the A+E department following a 2 minute tonic clonic generalised seizure, which self terminated. Whilst taking the history the following morning, she tells you that over the last 48 hours she has become increasingly unwell. She has been feeling increasingly anxious and has been having insomnia and vivid nightmares which wake her from sleep. She says that everything around her no longer looks real but more like a photocopy. Bowel and bladder movements have been normal. She feels generally weak and asks the lights to be dimmed in the examination room. When the nurse bell goes off in the next cubicle, she has to cover her ears.

On examination, she appears anxious, she is perspiring, respiratory rate 16/min, blood pressure 142/86 mmHg, heart rate 115 reg, sats 98% on air. You notice a fine tremor, especially in the hands and eyelids. GCS = 15. Oriented in time place and person. When you examine her, she tells you that it feels as if her legs are floating off the bed even though they are stationary. There is no flushing of the face

From looking at the computer records, you can see that she has a history of panic disorder treated with PRN lorazepam and sertraline 1 year ago. and has been treated for depression in the past. You also note from your records that she presented to A+E 5 days ago due to stress as she was sacked from her job.

Hb	13.6 g/dl
Platelets	232 * 10 ⁹ /l
WBC	6.9 * 10 ⁹ /l

Na ⁺	142 mmol/l
K ⁺	3.8 mmol/l
Urea	6.2 mmol/l
Creatinine	81 µmol/l

What is the most likely diagnosis?

	Benzodiazepine withdrawal
	Atypical Panic attack secondary to panic disorder
	LSD intoxication
	Benzodiazepine excess
	Opiate withdrawal

Dashboard

Overall score: 0%

1 -

□ Question 83 of 280



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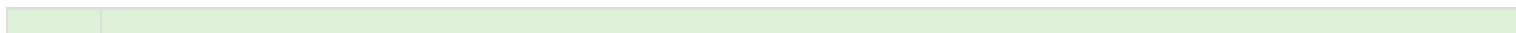
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	Atypical Panic attack secondary to panic disorder
	LSD intoxication
	Benzodiazepine excess
	Opiate withdrawal

Dashboard

Overall score: **0%**
1 -

□ Question 84 of 280



A 77 year old male presents to the Emergency Department with a two day history of right temporal, throbbing headache, constant in nature and 8/10 severity. He report this being the first ever episode of this headache and is different to his previous migraines, which have been typically on the left occipital region, lasting minutes, and fairly stereotyped over the past 60 years. Apart from migraines, he has no other medical history. On examination, his right scalp is tender and a prominent right temporal artery is noted. He is afebrile with no skin rashes. His blood tests are as follows:

Hb	13.8 g/dl
Platelets	$552 \times 10^9/l$
WBC	$11.5 \times 10^9/l$
ESR	85 mm/hr

Na ⁺	146 mmol/l
K ⁺	4.4 mmol/l
Urea	9.6 mmol/l
Creatinine	115 μ mol/l
CRP	23 mg/l

You empirically start him on 60mg prednisolone. He undergoes temporal artery biopsy within 24 hours of his admission demonstrating no signs of temporal arteritis.

What is the most appropriate next step?

	Repeat temporal artery biopsy
	Continue prednisolone but at reduced dose 10mg OD
	Discharge

	Continue prednisolone at 60mg
	Start anti-migraine medication

Dashboard

Overall score: 0%

1 -

□ Question 84 of 280



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	Discharge

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	Start anti-migraine medication

Dashboard

Overall score: **0%**

1 -

□ Question 85 of 280

□ □

A 42-year-old woman attends neurology clinic for review of her treatment strategy for multiple sclerosis. The patient had first developed symptoms of multiple sclerosis five years previously. Her first episode had involved sensory loss and motor weakness affecting her left leg. An MRI brain scan conducted at this time had demonstrated multiple lesions suggestive of multiple sclerosis. At this point in time, the patient had decided against receiving disease modifying therapy.

One year after her first episode, the patient suffered an episode of optic neuritis. A repeat MRI scan had demonstrated a progression of the previously observed radiographic lesions. Subsequently, the patient had been initiated on treatment with interferon beta. This treatment was continued for two years during which time the patient suffered no further relapses of multiple sclerosis. However, the patient found the unwanted effects of interferon beta to be progressively harder to tolerate and she eventually decided against continuing with this treatment. A subsequent trial of glatiramer acetate was quickly halted due to the patient experiencing severe symptoms of flushing.

Following the cessation of disease-modifying therapy, the patient had experienced multiple further relapses, including one episode where she had required hospitalisation due to cranial nerve involvement. Further assessment during this period found that the patient met the local criteria for aggressive or highly active multiple sclerosis. Accordingly, later line therapies were discussed with the patient who was keen to proceed.

Aside from her history of multiple sclerosis the patient suffered from no other significant medical problems and took no regular medications. The patient was a science teacher that had been unable to work for the past year due to her multiple relapses.

The later line therapy recommended for the patient is natalizumab. What is the essential investigation that must be completed prior to initiation of treatment with natalizumab?

	Transthoracic echocardiogram
	JCV antibody status
	Pulmonary function tests
	Thyroid function tests

Dashboard

Overall score: 0%

1 -

□ Question 85 of 280

□ □

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The later line therapy recommended for the patient is natalizumab. What is the essential investigation that must be completed prior to initiation of treatment with natalizumab?

	Transthoracic echocardiogram
	JCV antibody status
	Pulmonary function tests
	Thyroid function tests

Dashboard

Overall score: **0%**

1 -

□ Question 86 of 280

□ □

An 83-year-old female presents to the emergency department. The patient describes a vague history of arm and leg weakness and loss of vision though is unsure of a particular limb or visual field distribution. She states that these symptoms seemed to last around 6 hours. There are no abnormalities noted in the upper and lower neurological examination nor cranial nerve examination in the emergency department. The patient has a history of regular migraine of around 2 a week for the last 20 years, type two diabetes mellitus treated with metformin and hypertension which was diagnosed 8 years ago currently treated with amlodipine.

Her observations are.

Blood pressure - 145/90 mmHg

Heart rate - 83 beats per minute

Temperature - 37.5C

Respiratory rate - 15

Oxygen saturation - 98% on air

You suspect the patient may have had a transient ischaemic attack. Which radiological investigation is the most appropriate to aid diagnosis at this stage?

	MRI head with fluid attenuation inversion recovery (FLAIR)
	CT head with contrast
	Carotid dopplers
	MRI head
	MRI head with diffusion weighted imaging

Dashboard

Overall score: **0%**

1 -

□ Question 86 of 280

□ □

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	MRI head with fluid attenuation inversion recovery (FLAIR)
	CT head with contrast
	Carotid dopplers
	MRI head
	MRI head with diffusion weighted imaging

Dashboard

Overall score: **0%**

1 -

Question 87 of 280

A 74-year-old female has been diagnosed with moderate to severe Alzheimer's disease, on a background of a two-year progressive gradual cognitive decline. Her family had tried to cope on their own without seeking medical help, putting it down to old age but now, most likely requires nursing home care. MMSE 7/30. She has a past medical history of previous myocardial infarctions. She has not complained of chest pain recently and her ECG demonstrates no ischaemic changes, a PR interval of 290ms. What is the most appropriate treatment strategy?

	Donepezil
	Memantine
	Galantamine
	Rivastigmine
	Aspirin

Dashboard

Overall score: 0%

1 -

Question 87 of 280

□ □

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	Donepezil
	Memantine
	Galantamine
	Rivastigmine
	Aspirin

Dashboard

Overall score: **0%**

1 -

□ Question 88 of 280

□ □

A 45-year-old female presents to the hyperacute stroke unit with expressive dysphasia and mild right sided upper limb weakness without sensory disturbance seven hours after symptom onset. Although she is outside the thrombolysis window, a hyperacute CT head demonstrates multiple small infarcts in the left middle cerebral artery territory while a simultaneous CT angiogram of her extra and intracranial vessels was reported by the radiologist as a string of beads appearance. What is the most appropriate next investigation to request to demonstrate the underlying cause of this young females strokes?

	Factor V Leiden
	CT angiogram renal arteries
	Lupus anticoagulant
	MRI head with contrast
	MR venogram

Dashboard

Overall score: 0%

1 -

□ Question 88 of 280

□ □

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	Factor V Leiden
	CT angiogram renal arteries
	Lupus anticoagulant
	MRI head with contrast
	MR venogram

Dashboard

Overall score: **0%****1** -

□ Question 89 of 280



A 27-year-old man attends ambulatory care with a one day history of facial droop. He is a mountain bike instructor and is extremely anxious that this may be related to a fall last month. He hasn't been riding for the last month because he has felt unwell with aches and pains and some odd bruising up his leg.

On examination he has a bilateral VII nerve weakness but no other cranial nerve lesions detected. The arms and legs show no focal neurology.

Skin is intact with no skin lesions seen. There is no evidence of any joint effusions and all joints appear to have a full range of motion

Investigations:

Haemoglobin	127 g/L (130-180)
White cell count	10.0 × 10 ⁹ /L (4.0-11.0)

Chest X-ray	Normal
-------------	--------

What is the most likely diagnosis?

	Sarcoidosis
	Lymes Disease
	Syphilis
	Bells Palsy
	Subdural Haemorrhage

Overall score: **0%**

1 -

□ Question 89 of 280



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Chest X-ray	Normal
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What is the most likely diagnosis?

	Sarcoidosis
	Lymes Disease
	Syphilis
	Bells Palsy
	Subdural Haemorrhage

Overall score: **0%**

1 -

Question 90 of 280

A 32-year-old woman presents to clinic with a constant headache. She has attempted to control this by taking daily paracetamol, ibuprofen and codeine for the last two months. Her headache has not improved. She describes the headache as present almost every single day but is not disabling. There is a concern that she may have a medication overuse headache. What is the most appropriate management?

<input type="checkbox"/>	Wean off codeine
<input type="checkbox"/>	Stop codeine abruptly
<input type="checkbox"/>	Stop codeine and ibuprofen abruptly
<input type="checkbox"/>	Wean off codeine and ibuprofen
<input type="checkbox"/>	Stop all medications abruptly

Dashboard

Overall score: **0%**

1 -

Question 90 of 280

□ □

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	Stop codeine abruptly
	Stop codeine and ibuprofen abruptly
	Wean off codeine and ibuprofen
	Stop all medications abruptly

Dashboard

Overall score: **0%**

1 -

□ Question 91 of 280

□ □

A 25-year-old F1 driver complains of neck pain following a race. Three days later he presents with left sided facial numbness as well as numbness across the right upper and lower limb. Positive findings on examination are the loss of pain and temperature sensation on the left side of the face in all trigeminal distributed areas. There is also the loss of pain and temperature sensation in the right upper and lower limbs. The left pupil is much smaller than the right and there is a partial ptosis on the left. Eye movements are normal. Power, coordination, and reflexes are all normal. What is the gold standard brain-imaging method used in order to establish the primary diagnosis?

	Plain MRI brain
	Carotid artery doppler ultrasound scan
	Plain CT scan brain
	CT angiogram head and neck
	Electroencephalogram (EEG)

Dashboard

Overall score: 0%

1 -

□ Question 91 of 280

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	Plain CT scan brain
	CT angiogram head and neck
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Dashboard

Overall score: **0%****1** -

□ Question 92 of 280

□ □

A 41 year old lady with a background of vitiligo and pernicious anaemia presents with weakness largely affecting her shoulders and hip muscles. The problem is variable throughout the day dependent on how much activity she has done. She does feel that symptoms are at their worst at the end of the day, when indeed her family also say her voice becomes quieter. Clinical examination demonstrates proximal muscle weakness after repeated testing. Electromyography demonstrates a decline in the amplitude of successive potentials (decremental response). Antibodies to the acetylcholine receptor (AChR) are negative on serum testing. Her CT thorax is normal. Which of the following is likely to be most helpful in establishing a diagnosis?

	Anti-smooth muscle antibodies
	Anti-muscle specific kinase (MuSK) antibodies
	Anti-striated muscle antibody
	Anticardiolipin antibodies
	Anti-transglutaminase antibodies

Dashboard

Overall score: 0%

1 -

□ Question 92 of 280

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	Anti-muscle specific kinase (MuSK) antibodies
	Anti-striated muscle antibody
	Anticardiolipin antibodies
	Anti-transglutaminase antibodies

Dashboard

Overall score: **0%****1** -

Question 93 of 280

□ □

A 64-year-old male presents with four month history of worsening tremor of his left hand, associated with 'clumsiness and slowness' of his left arm. The patient complains that this is limiting his ability to continue to work as a lawyer and is very keen on a treatment. On examination, you notice a slow resting tremor of his left hand, cogwheeling of the left wrist and rigidity of the left upper limb. The right arm is unremarkable. Which drug is the most appropriate treatment?

	Selegiline
	Ropinirole
	Pergolide
	Sinemet (levodopa and carbidopa)
	Madopar (levodopa and benserazide)

Dashboard

Overall score: 0%

1 -

□ Question 93 of 280

□ □

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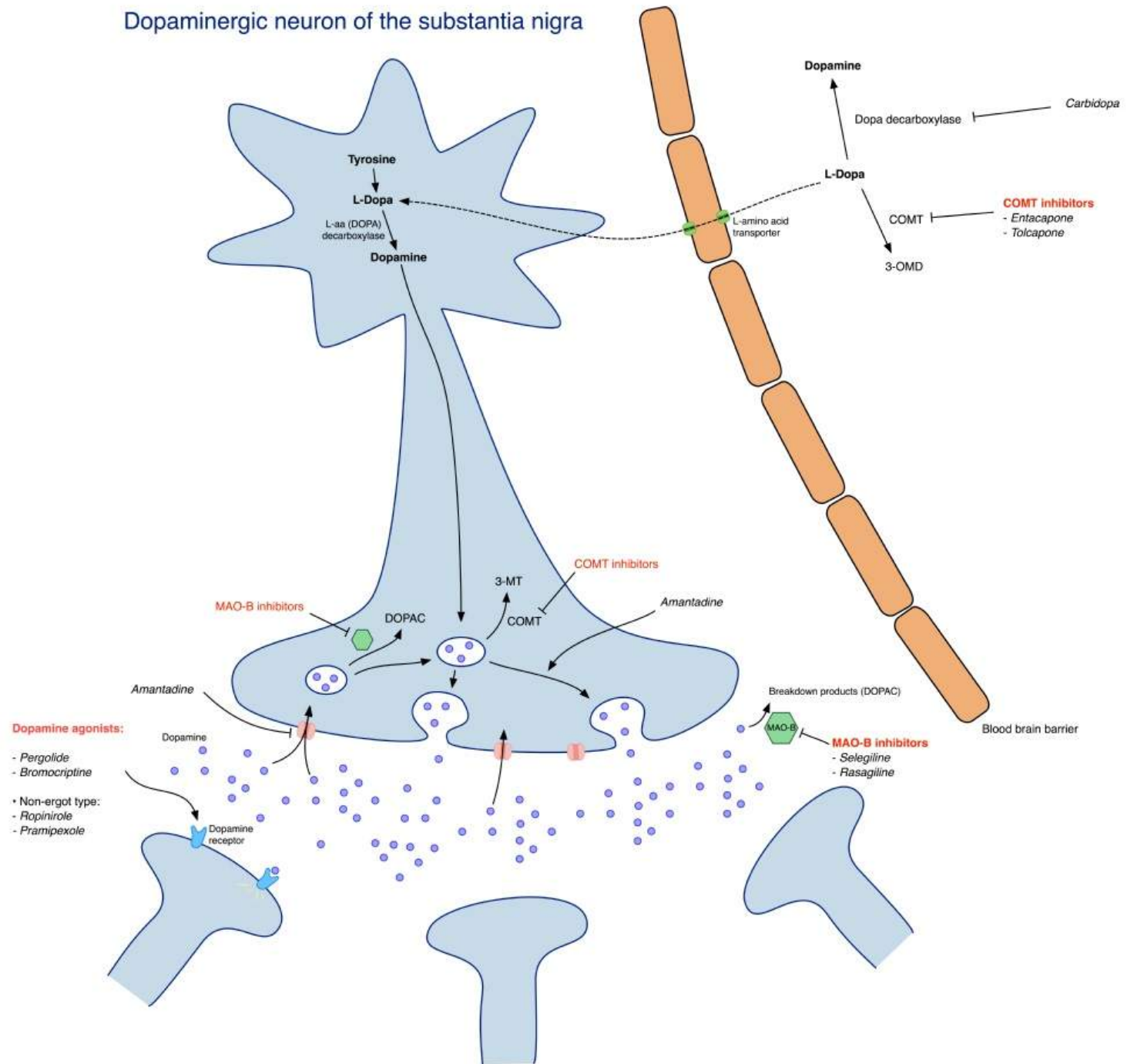
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	Madopar (levodopa and benserazide)

Dashboard

Overall score: 0%

1 -

Dopaminergic neuron of the substantia nigra



□ Question 94 of 280



A 66-year-old female is brought into Emergency Department by her distraught husband, who reports that she has not been out of bed for 3 days and seems unable to recognise him. He reports no recent fevers or rigors, she has not complained of cough, dysuria, sore throat or diarrhoea and vomiting prior to being unwell. She is well known to local neurologists: she is undergoing off-label rituximab for difficult to manage relapsing-remitting progressive multiple sclerosis, with previous white matter lesions in her corpus callosum, periventricular white matter, and lower thoracic transverse myelitis.

Over the past 6 years, she had continued to relapse despite interferon beta, natalizumab, mitoxantrone and cyclophosphamide. At baseline, she is weak in her lower limbs and is able to stand only with assistance of a turning apparatus, then able to walk about 3 steps. She is normally cognitively intact and fully orientated, normally responsible for organising the couples finances. Her past medical history includes type 1 diabetes mellitus, autoimmune thyroiditis and previous deep vein thrombosis 5 years ago (warfarin since discontinued). Her medication history includes lantus, novomix, levothyroxine and 3 monthly infusions of rituximab, which had stably maintained her MS for 4 years.

On examination, she is not orientated to time or place and appears extremely irritable. Halfway through the examination, she becomes extremely tearful. There is a full range of neck movements and no photophobia.

Neurological examination is difficult due to patient cooperation: pupils are equal and reactive, there is a full range of eye movements and no obvious facial asymmetry. Power in her upper limbs were at least 3/5, lower limbs are unable to counteract gravity. Both plantar responses are upgoing. Her bloods are as follows:

Hb	134 g/l
Platelets	$268 \times 10^9/l$
WBC	$7.8 \times 10^9/l$

Na ⁺	137 mmol/l
K ⁺	4.4 mmol/l
Urea	4.5 mmol/l
Creatinine	60 μ mol/l

CRP	5 mg/l
HIV	negative
Glucose	7.4 mmol/l

A lumbar puncture was performed:

WBC	16 /mm ³
RBC	150 /mm ³
Protein	0.71 g/l
Glucose	3.5 mmol/l
PCR and gram staining	awaited

What is the most appropriate management step?

<input type="radio"/>	Intravenous aciclovir
<input type="radio"/>	Intravenous methylprednisolone
<input type="radio"/>	Intravenous immunoglobulin
<input type="radio"/>	Intravenous rituximab infusion
<input type="radio"/>	Psychiatric input

Dashboard

Overall score: **0%**

1 -

□ Question 94 of 280



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What is the most appropriate management step?

	Intravenous aciclovir
	Intravenous methylprednisolone
	Intravenous immunoglobulin
	Intravenous rituximab infusion
	Psychiatric input

Dashboard
Overall score: 0% 1 -

Question 95 of 280



A 79-year-old is brought into hospital with muscle cramps, fevers and passing dark urine. He is known to have previously had Parkinson's disease and takes Sinemet 125 five times a day. His daughter, who normally picks up his medicine for him from the pharmacy has been called away on business for the past 5 days. As a result, the patient's supplies ran out and he has not taken his PD meds for 3 days. His blood pressure is fluctuant, from 77/52 mmHg to 150/88mm Hg. On examination, his temperature is 39.2 degrees, his heart sounds are quiet but present and chest auscultation is unremarkable. You note rigid muscles in four all limbs, no obvious superficial evidence of head injury and new confusion, with abbreviated mental test 0/10. You start intravenous fluids, intravenous broad spectrum antibiotics, catheterise the patient and insert a nasogastric tube to administer his regular medications. What is the underlying diagnosis?

	Urosepsis
	Restrictive pericarditis
	Idiopathic Parkinson's disease progression
	L-dopa dyskinesia
	Neuroleptic malignant syndrome

Dashboard

Overall score: 0%

1 -

Question 95 of 280



A 79-year-old is brought into hospital with muscle cramps, fevers and passing dark urine. He is known to have previously had Parkinson's disease and takes Sinemet 125 five times a day. His daughter, who normally picks up his medicine for him from the pharmacy has been called away on business for the past 5 days. As a result, the patient's supplies ran out and he has not taken his PD meds for 3 days. His blood pressure is fluctuant, from 77/52 mmHg to 150/88mm Hg. On examination, his temperature is 39.2 degrees, his heart sounds are quiet but present and chest auscultation is unremarkable. You note rigid muscles in four all limbs, no obvious superficial evidence of head injury and new confusion, with abbreviated mental test 0/10. You start intravenous fluids, intravenous broad spectrum antibiotics, catheterise the patient and insert a nasogastric tube to administer his regular medications. What is the underlying diagnosis?

	Urosepsis
	Restrictive pericarditis
	Idiopathic Parkinson's disease progression
	L-dopa dyskinesia
	Neuroleptic malignant syndrome

Dashboard

Overall score: 0%

1 -

Question 96 of 280



A 23-year-old student presented with a tremor in his right arm. He had also noticed increasing difficulty with speech, clumsiness in both hands and unsteadiness walking. He reported being very stressed and anxious. His relationship with his long-term girlfriend had come to an end and his younger brother had recently been diagnosed with bipolar affective disorder.

This student had a past medical history of depression and was born prematurely at 29 weeks gestation requiring ventilatory support in the neonatal intensive care unit. He took no regular medications and denied recreational drug use. He was, however, a binge drinker, consuming at least 30 units of alcohol per week. He had a penicillin allergy.

On examination there was a bilateral resting tremor more marked in the right arm than the left. The tone of the right arm was slightly increased. The movements of his upper limbs and hands were slow with reduced dexterity although there was no weakness. Reflexes were present and symmetrical. There was no sensory disturbance. On walking this patient had a broad-based, slow, ataxic gait with small steps. Rombergs test was negative. Power, tone, reflexes and sensation in the lower limbs were normal.

Investigations:

Hb	11.0 g/dl
Platelets	$110 \times 10^9/l$
WBC	$10.5 \times 10^9/l$
International Normalised Ratio	1.3

Na ⁺	134 mmol/l
K ⁺	4.0 mmol/l
Urea	5.8 mmol/l
Creatinine	78 μ mol/l

--	--

Bilirubin	80 µmol/l
ALP	211 u/l
ALT	94 u/l
Amylase	72 u/l

Given the most likely underlying diagnosis which of the following would be the most appropriate management plan?

	Start penicillamine as an inpatient and prescribe an alcohol detoxification regimen
	Prescribe an alcohol detoxification regimen and refer to a geneticist
	Start pentoxifylline and prescribe an alcohol detoxification regimen
	Start trientine as an inpatient and prescribe an alcohol detoxification regimen
	Refer to the psychiatric team

Dashboard

Overall score: **0%**

1 -

□ Question 96 of 280



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Dashboard

Overall score: **0%**

1 -

□ Question 97 of 280



A 64 year old man presented to the Emergency Department after becoming unwell at home. His wife reported that the patient experienced a sudden onset and severe headache while watching television. Shortly afterwards she found him to have become confused and drowsy and an ambulance was called. On arrival in the Emergency Department, the patient suffered a witnessed tonic-clonic seizure, self-terminating after two minutes.

The patient had known hypertension and hypercholesterolaemia and had suffered a non-ST elevation myocardial infarction two years before, treated with a drug-eluting stent to the left anterior descending artery. Regular medications included ramipril 10 mg OD, bisoprolol 10 mg OD, bendroflumethiazide 2.5 mg OD, simvastatin 40 mg OD and aspirin 75 mg OD. The patient's wife reported that compliance with anti-hypertensive medications had been inconsistent and that controlling the patient's blood pressure had been an on-going problem over the previous two years. The patient was a retired builder and ex-smoker.

On examination, the patient was drowsy (GCS M4V2E3) but was protecting his own airway. Pupils were equal and reactive. The patient was spontaneously moving all his limbs and had downgoing plantar reflexes. Cardiovascular, respiratory and abdominal examination was unremarkable. Initial observations and investigations are listed below.

Blood pressure 220 / 115 mmHg

Heart rate 89 beat / minute

O2 sats (15 L O2) 100 %

Respiratory rate 19 / minute

Temperature 37.1°C.

CT brain: no extra-axial bleeding or collection; no intracerebral haemorrhage; no evidence acute ischaemic stroke; no subarachnoid blood; normal ventricular system; mild small vessel disease in keeping with patient's age.

Lumbar puncture:

CSF red cells	3/ mm ³
CSF white cells	3 / mm ³
CSF gram stain	unremarkable
CSF glucose	60 % serum level

protein	0.5 g / L
CSF	negative for bilirubin and xanthochromia

Given persistent reduced GCS and need to obtain blood pressure control, patient was intubated and transferred to the neuro intensive care unit. Following discussion with neurological team further imaging was arranged

MR brain with angiography: structurally normal brain as per previous study; bilateral symmetric vasogenic oedema involving the subcortical white matter in the parietal-occipital, posterior temporal and posterior frontal lobes; MRA unremarkable without any area of stenosis or vasospasm.

What is the correct diagnosis?

<input type="checkbox"/>	Reversible cerebral vasoconstriction syndrome
<input type="checkbox"/>	Posterior reversible leucoencephalopathy syndrome
<input type="checkbox"/>	Acute disseminated encephalomyelitis
<input type="checkbox"/>	Cerebral venous thrombosis
<input type="checkbox"/>	Pituitary apoplexy

Dashboard

Overall score: **0%**

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□ Question 97 of 280



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Dashboard

Overall score: **0%**

1 -

□ Question 98 of 280

□ □

A 26-year-old man is admitted for investigation after having increasing trouble walking. On admission he is found to have a severely ataxic gait and is unable to walk in a straight-line. For many weeks he has been complaining of visual problems, dizziness, headaches and clumsiness.

On examination he is noted to have horizontal nystagmus, an intention tremor and past pointing. On fundoscopy a large, erythematous retinal lesion is present surrounded by tortuous, dilated vessels.

His father had similar problems in his 20's.

A CT scan is arranged:



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What is the most likely underlying diagnosis?

<input type="radio"/>	Friedreich's ataxia
<input type="radio"/>	Ataxic telangiectasia
<input type="radio"/>	Neurofibromatosis
<input type="radio"/>	Tuberous sclerosis
<input type="radio"/>	Von Hippel-Lindau syndrome

Dashboard

Overall score: 0%

1 -

□ Question 98 of 280

□ □

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1 -

□ Question 98 of 280

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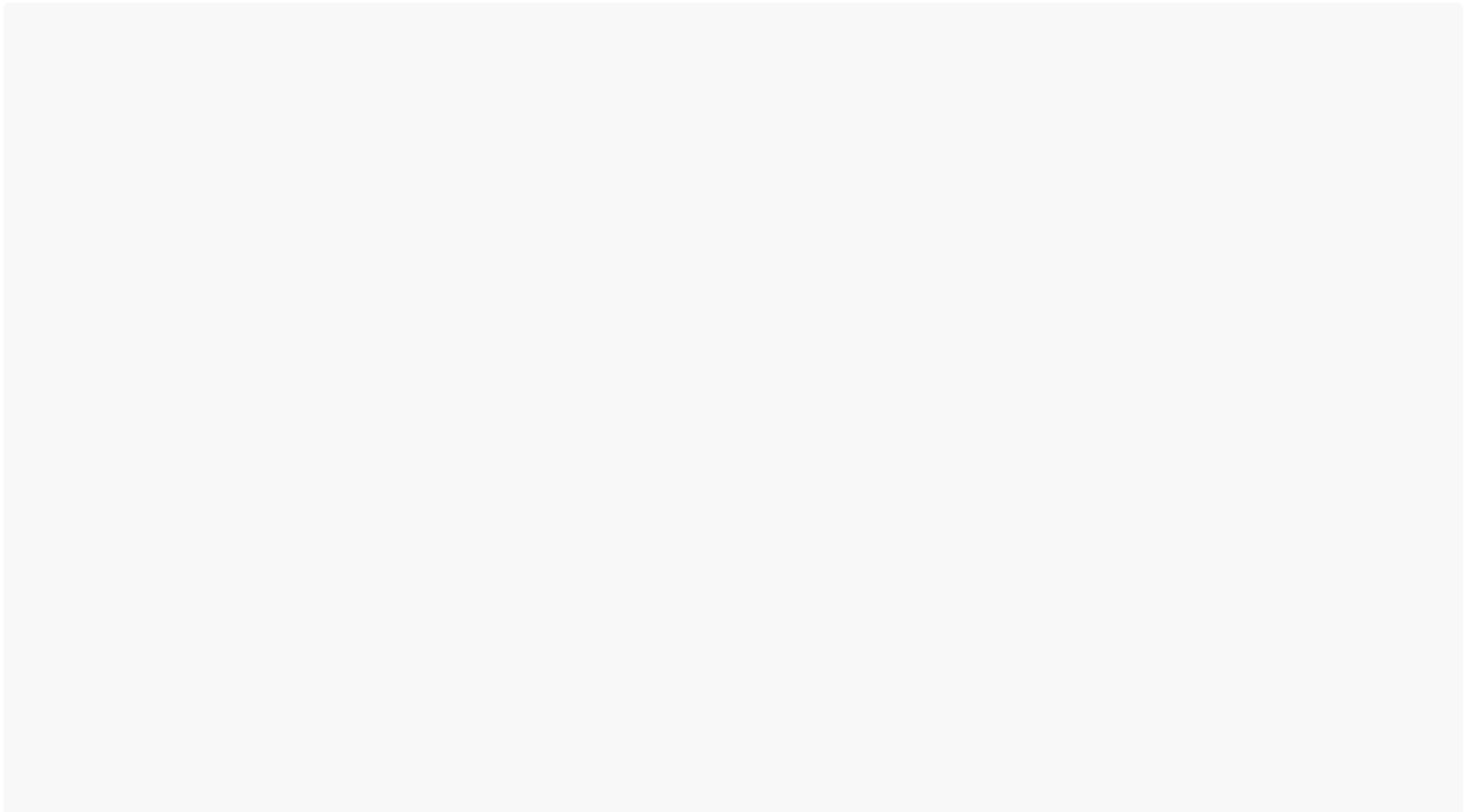
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□ Question 98 of 280

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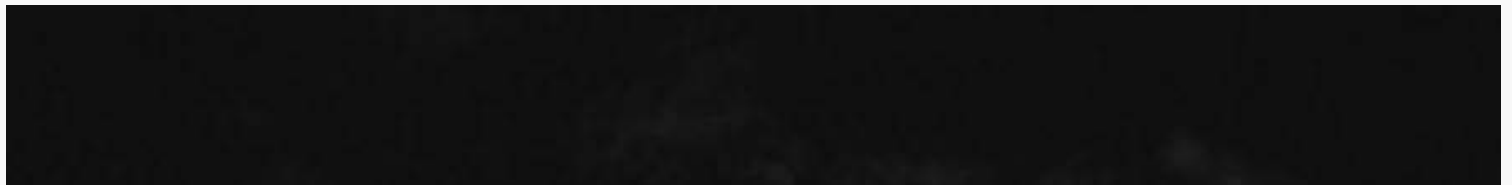
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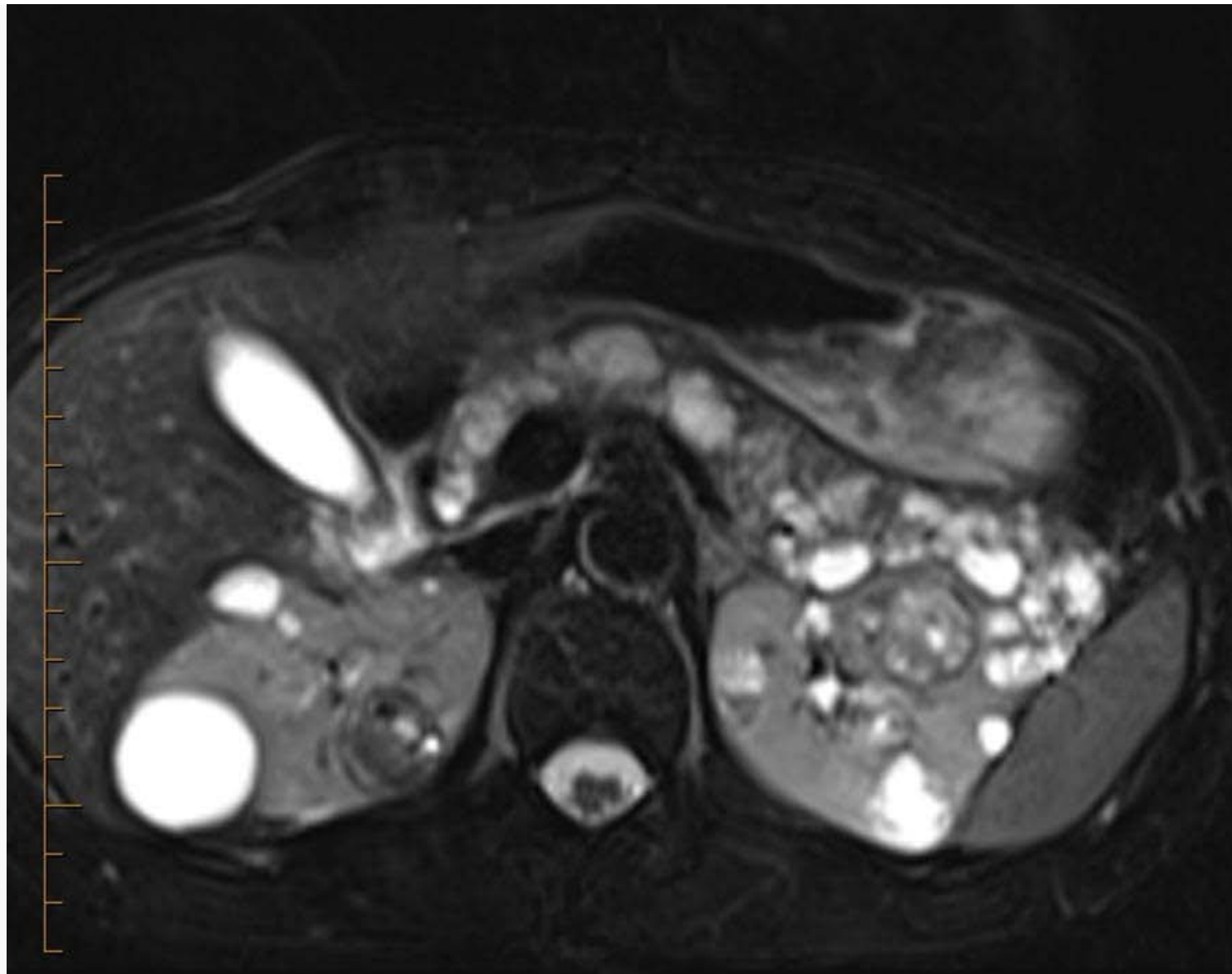
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Dashboard

Overall score: 0%

1 -





□ Question 99 of 280



A 36-year-old male from India presents with worsening headache and vomiting. He is known to have HIV but has been lost to follow up over the last 5 years. His CD4 count from his last appointment was 400.

On examination he has no localising signs however fundoscopy revealed papilloedema.

Investigations:

haemoglobin	115 g/L (115-165)
white cell count	$9.4 \times 10^9/L$ (4.0-11.0)
platelet count	$220 \times 10^9/L$ (150-400)
erythrocyte sedimentation rate	50 mm/1st h (<30)
serum urea	7.0 mmol/L (2.5-7.0)
serum creatinine	105 mol/L (60-110)
serum alanine aminotransferase	17 U/L (5-35)
serum aspartate aminotransferase	26 U/L (1-31)
Cryptococcal antigen test	Negative
CD4 Count	65 cells/mm ³
CT Head	5cm ring enhancing lesion in right temporal lesion with surrounding oedema

What is most appropriate management?

	Amphotericin, Fluconazole and prednisolone
	Rifampicin, Isoniazid, Pyrazinamide, Ethambutol and prednisolone

	Trimethorpim-Sulphamethoxazole, Rifampicin, Isoniazid, Pyrazinamide, Ethambutol and prednisolone
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	Pyrimethamine, Sulfadiazine, Rifampicin, Isoniazid, Pyrazinamide, Ethambutol, and Prednisolone

Dashboard

Overall score: 0%

1 -

□ Question 99 of 280



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1 -

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Dashboard

Overall score: 0%

1 -

31



Question 99 of 280

□ □

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Dashboard

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1 -



Question 99 of 280

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Dashboard

Overall score: 0%

1 -



W 114 : L 51

Question 99 of 280

□ □

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Dashboard

Overall score: **0%**

1 -



W 1942 : L 971

Question 100 of 280

□ □

An 85-year-old complains of severe headaches and lethargy over the past 3 weeks. His past medical history includes atrial fibrillation for which he takes warfarin. A CT head (with contrast) is performed:



What is the most likely diagnosis?

	Normal age-related changes
	Extradural haematoma

	Subdural haematoma
	Meningioma
	Subarachnoid haemorrhage

Dashboard

Overall score: **0%**

1 -

Question 100 of 280

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Dashboard

Overall score: **0%**
1 -

Question 100 of 280

□ □

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© Image used on license from Radiopaedia

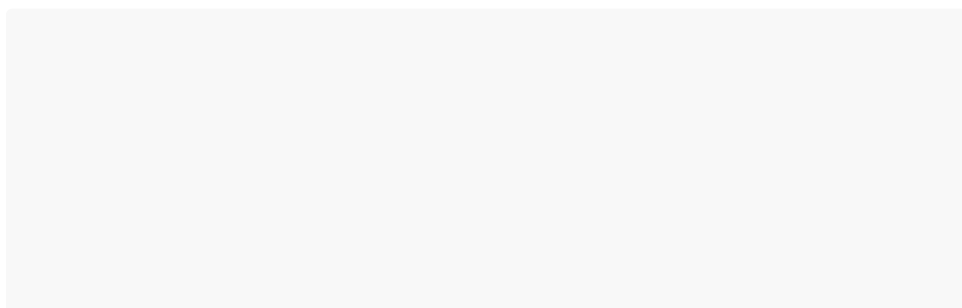
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Dashboard

Overall score: 0%

1 -

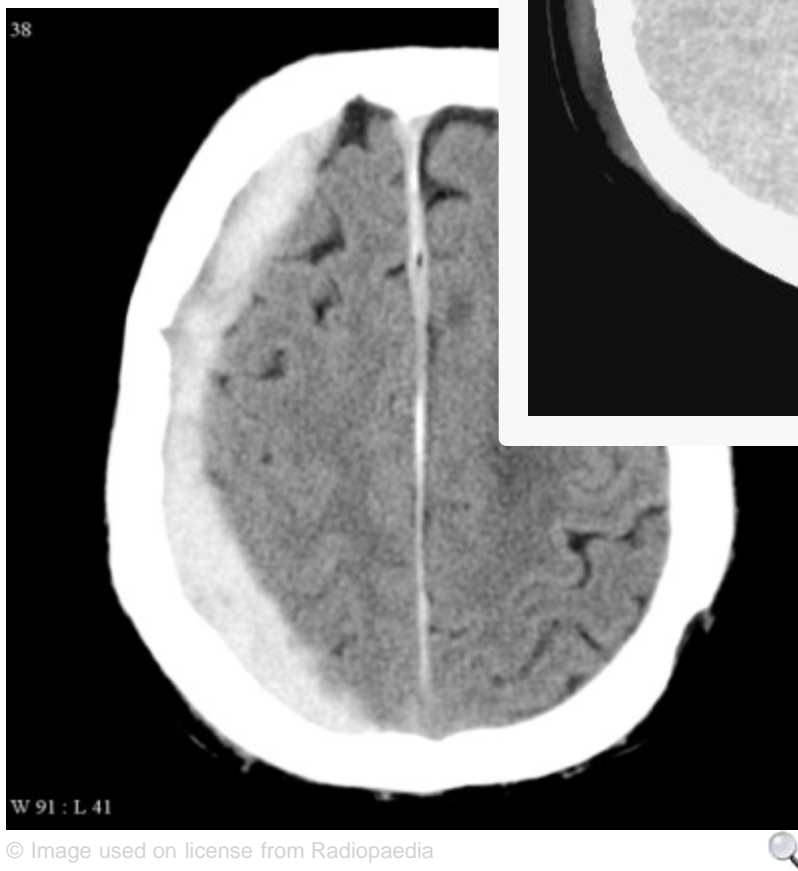




Passmedicine

□ Question 100 of 280

An 85-year-old complains of severe headaches and lethargy over the past few days. He has a long-standing history of atrial fibrillation for which he takes warfarin. A CT head (with contrast)



What is the most likely diagnosis?

	Normal age-related changes
	Extradural haematoma

	Subdural haematoma
	Meningioma
	Subarachnoid haemorrhage

Dashboard

Overall score: **0%**
1 -

Question 100 of 280

□ □

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© Image used on license from Radiopaedia

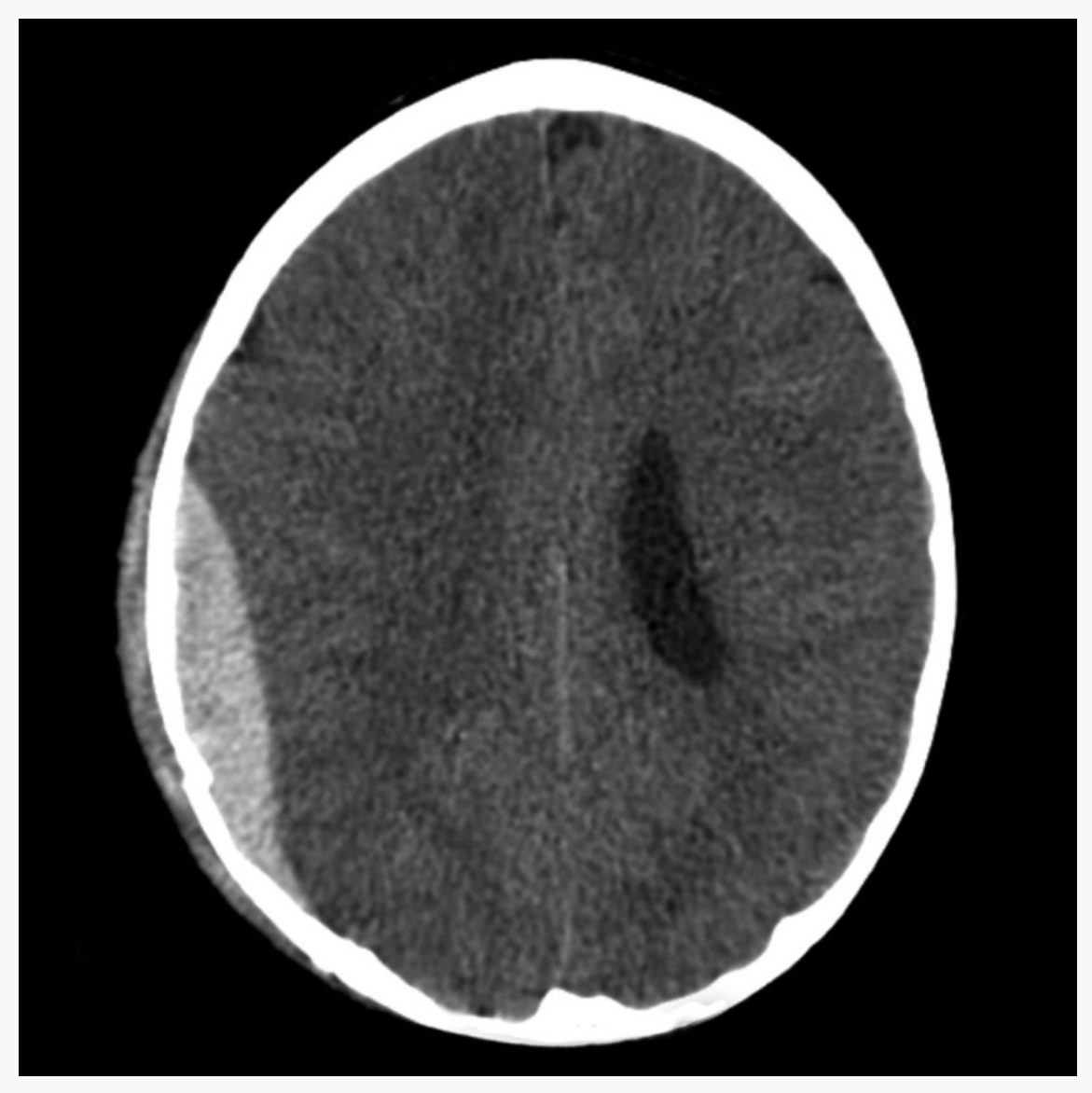
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Dashboard

Overall score: 0%

1 -



Question 100 of 280



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© Image used on license from Radiopaedia

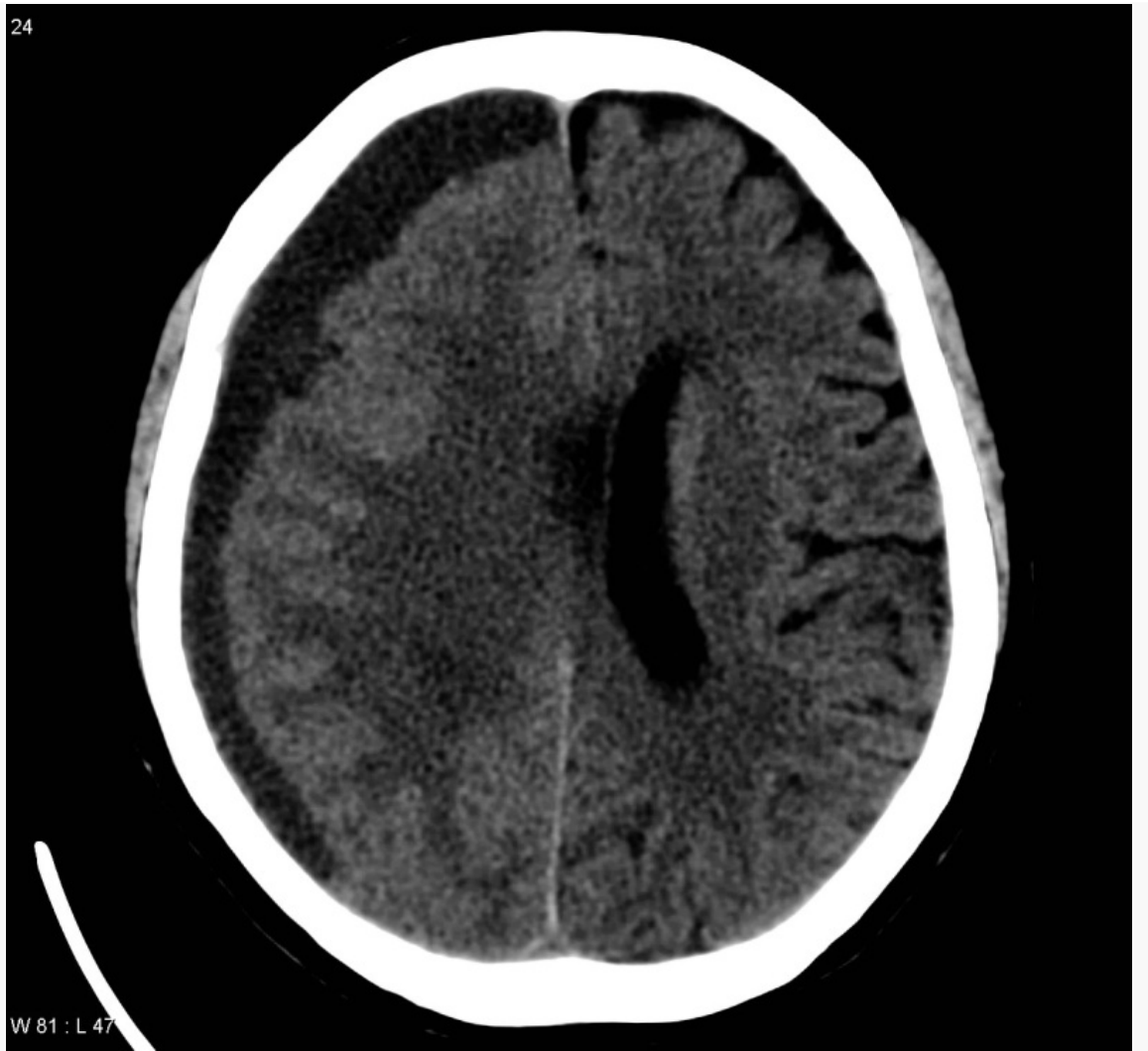
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	Extradural haematoma
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Dashboard

Overall score: 0%

1 -



□ Question 100 of 280

□ □

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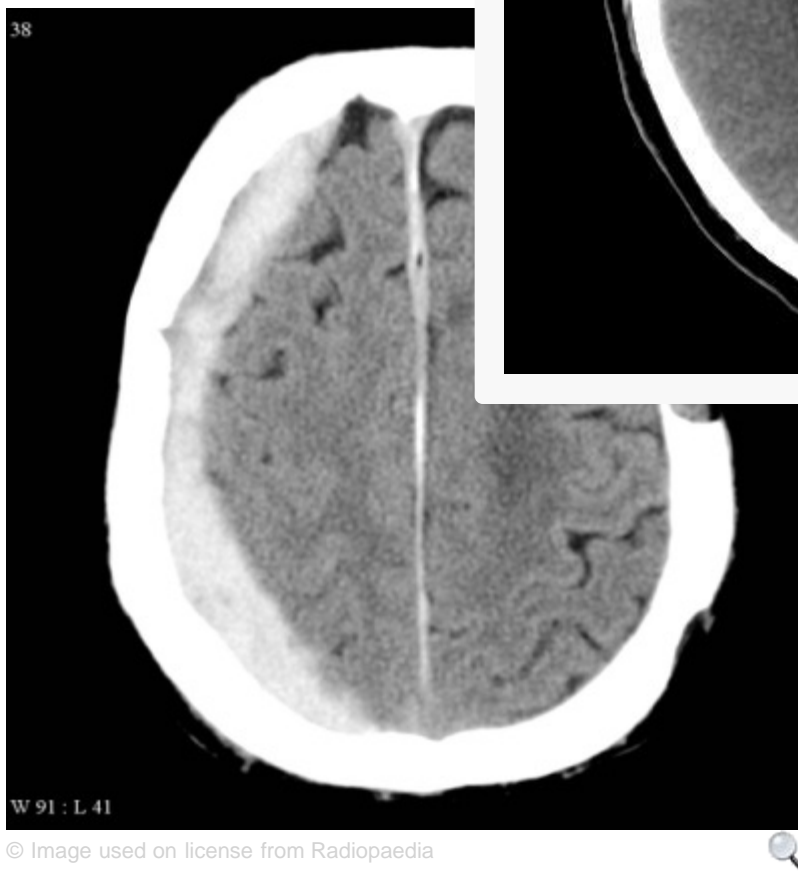
Dashboard

Overall score: **0%**
1 -



□ Question 100 of 280

An 85-year-old complains of severe headaches and lethargy over atrial fibrillation for which he takes warfarin. A CT head (with contr



What is the most likely diagnosis?

	Normal age-related changes
	Extradural haematoma

	Subdural haematoma
	Meningioma
	Subarachnoid haemorrhage

Dashboard

Overall score: **0%**
1 -

□ Question 100 of 280

□ □

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	Subdural haematoma
	Meningioma
	Subarachnoid haemorrhage

Dashboard

Overall score: **0%**
1 -



□ Question 101 of 280



A 64 year old man presents with a 6 month history of abnormal behaviours which have been noticed by his wife. He has described seeing vivid visual hallucinations of clowns in his living room which sometimes talk to him and appear very real. He believes that he is the head of a circus and is about to go on a world tour although this is not true.

At times he is lucid and is fully independent but at other times he is disorientated in time and place and is unable to perform simple tasks such as preparing food and going to the shops. His wife thinks that his mood is also lower since the onset of symptoms. He presented in A+E today because of having a second fall in two weeks.

There is no history of infective symptoms. He went to see his GP two days ago who thought that he may have a UTI and prescribed trimethoprim.

He has a history of stroke 10 years ago and hypertension and takes warfarin, amlodipine and enalapril.

Physical examination is unremarkable except for slightly increased tone on the left side compared to the right.

Bloods:

Hb	14.9 g/dl
Platelets	$387 \times 10^9/l$
WBC	$12.8 \times 10^9/l$

Na ⁺	142 mmol/l
K ⁺	4.6 mmol/l
Urea	6.4 mmol/l
Creatinine	84 μ mol/l

Bilirubin	6 μ mol/l
ALP	64 u/l

ALT	15 u/l
Calcium	2.35 mmol/l
Albumin	41 g/l

MSU (from GP from 2 days ago): Heavy growth of E.coli Sensitive to trimethoprim, nitrofurantoin, amoxicillin and co-amoxiclav

CT Brain: some generalised atrophy and periventricular white matter changes normal for age. Changes in keeping with an old left sided lacunar infarct

Mini Mental State Examination 17/30

Which medications would most appropriately treat the underlying diagnosis?

	Olanzapine
	Rivastigmine
	Co-amoxiclav
	Sinemet
	Aspirin 300mg

Dashboard

Overall score: **0%**

1 -

□ Question 101 of 280



A 64 year old man presents with a 6 month history of abnormal behaviours which have been noticed by his wife. He has described seeing vivid visual hallucinations of clowns in his living room which sometimes talk to him and appear very real. He believes that he is the head of a circus and is about to go on a world tour although this is not true.

At times he is lucid and is fully independent but at other times he is disorientated in time and place and is unable to perform simple tasks such as preparing food and going to the shops. His wife thinks that his mood is also lower since the onset of symptoms. He presented in A+E today because of having a second fall in two weeks.

There is no history of infective symptoms. He went to see his GP two days ago who thought that he may have a UTI and prescribed trimethoprim.

He has a history of stroke 10 years ago and hypertension and takes warfarin, amlodipine and enalapril.

Physical examination is unremarkable except for slightly increased tone on the left side compared to the right.

Bloods:

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CT Brain: some generalised atrophy and periventricular white matter changes normal for age. Changes in keeping with an old left sided lacunar infarct

Mini Mental State Examination 17/30

Which medications would most appropriately treat the underlying diagnosis?

	Olanzapine
	Rivastigmine
	Co-amoxiclav
	Sinemet
	Aspirin 300mg

Dashboard

Overall score: **0%**

1 -

Question 102 of 280

□ □

A 75-year-old right handed female with a background of breast cancer treated with chemotherapy five months ago presents with a two day history of difficulty finding her words. There is no history of seizure or headache. On examination she has a Glasgow coma scale 15/15, she is a pyrexial, there is no dysarthria, although there is an apparent expressive dysphasia with no other focal neurology. Her blood tests are unremarkable.

Her CT head is reported as follows:

Left inferior frontal lesion with surrounding oedema consistent with a metastasis

What is the next most appropriate step?

	Intravenous dexamethasone
	Lamotrigine
	Mannitol
	Intravenous aciclovir
	Loading dose of phenytoin

Dashboard

Overall score: 0%

1 -

Question 102 of 280

□ □

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Dashboard

Overall score: **0%**

1 -

Question 102 of 280

□ □

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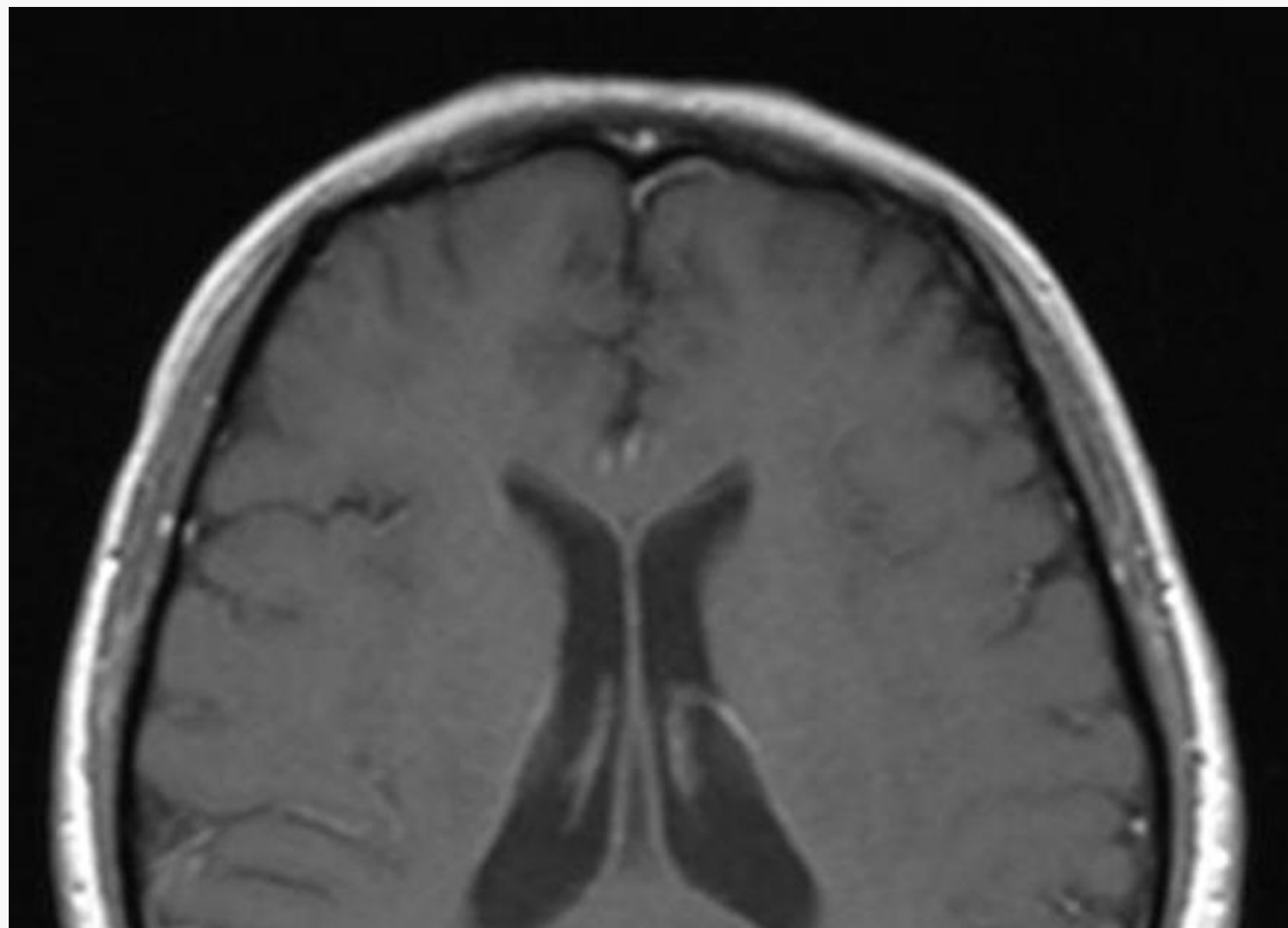
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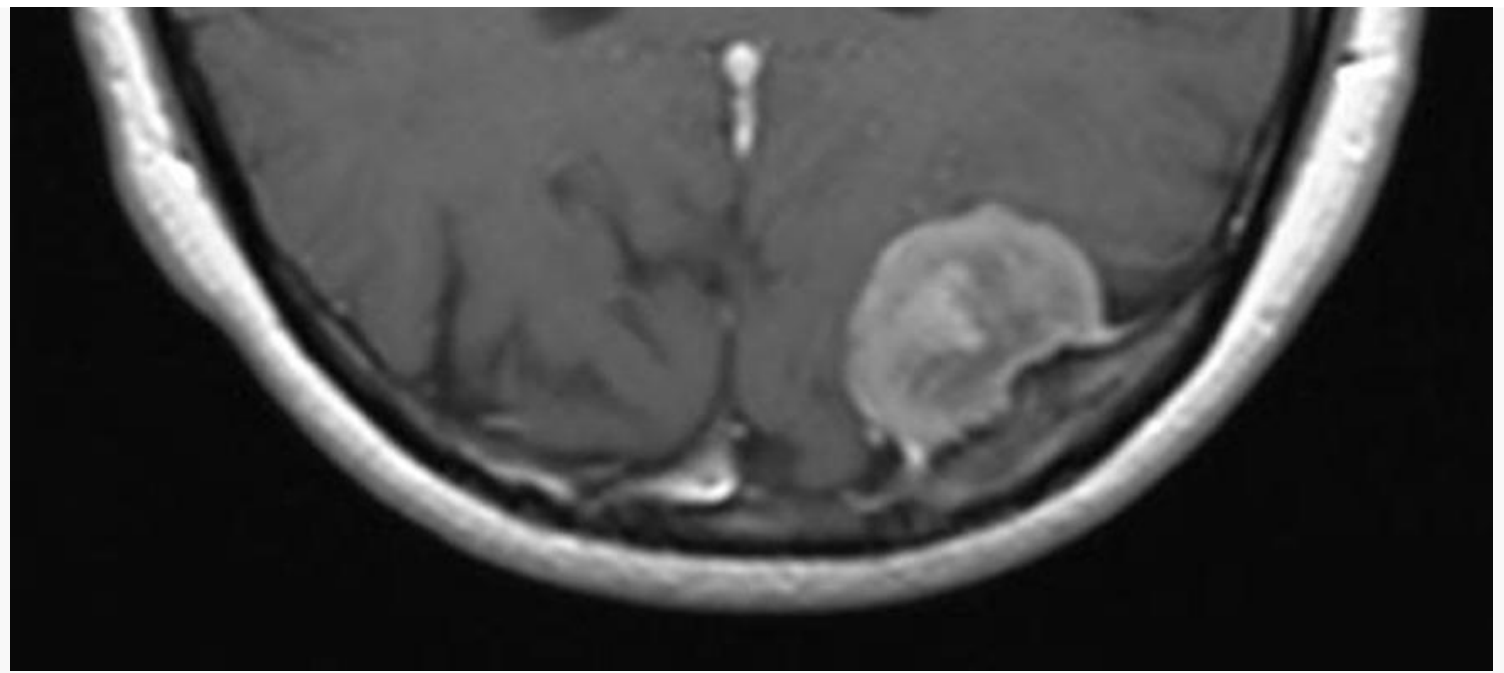
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	Loading dose of phenytoin

Dashboard

Overall score: **0%**

1 -





Question 102 of 280

□ □

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	Lamotrigine
	Mannitol
	Intravenous aciclovir
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Dashboard

Overall score: 0%

1 -



□ Question 103 of 280

□ □

A 45-year-old man is reviewed in the HIV clinic. He was diagnosed with HIV 25 years ago and has enjoyed good health on highly active antiretroviral treatment until around 4 years ago when he had an episode of *Pneumocystis jirovecii* pneumonia.

Today he is somewhat confused. His partner reports that he has been complaining of headaches for several weeks and has also been uncharacteristically aggressive.

His latest CD4 count is 29 cells/ μ l. An MRI (T1 C+) is requested:



What is the most appropriate treatment?

	Sulfadiazine + pyrimethamine
	Sulfadiazine + pyrimethamine + steroids
	Steroids + methotrexate
	Rifampicin + isoniazid + pyrazinamide + ethambutol + steroids
	Amphotericin B

Dashboard

Overall score: 0%

1 -

□ Question 103 of 280

□ □

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Dashboard

Overall score: **0%**

1 -

Question 103 of 280



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Overall score: 0%

1 -

31



Question 103 of 280

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© Image used on license from Radiopaedia

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	Sulfadiazine + pyrimethamine + steroids
	Steroids + methotrexate
	Rifampicin + isoniazid + pyrazinamide + ethambutol + steroids
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Overall score: **0%**

1 -



Question 103 of 280



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	Amphotericin B

Overall score: **0%**

1 -

7



W 114 : L 51

Question 103 of 280

□ □

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	Steroids + methotrexate
	Rifampicin + isoniazid + pyrazinamide + ethambutol + steroids
	Amphotericin B

Overall score: **0%**

1 -



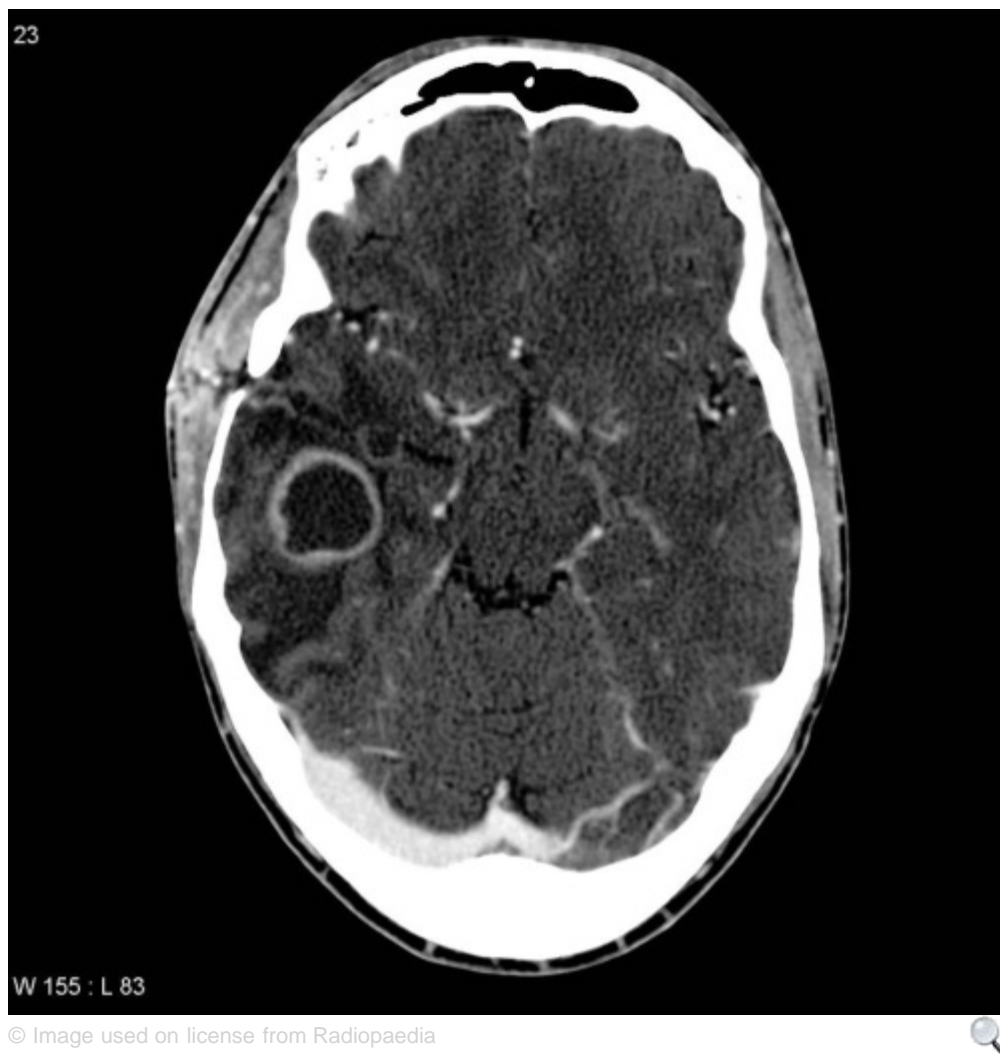
□ Question 104 of 280

□ □

A 23-year-old man is admitted to ITU after arriving from India on a medical transfer plane. He had been travelling in India for around 4 weeks before starting to complain of feeling unwell. His girlfriend describes acting out of character and having numerous seizures prior to being admitted to hospital in Patna, east India.

His girlfriend describes him having a scan in India as well as a procedure in theatre which was abandoned.

A CT head with contrast is performed:



What is the most likely diagnosis?

	Neurocysticercosis
	Meningioma
	Glioblastoma multiforme
	Cerebral abscess
	Herpes simplex encephalitis

Dashboard

Overall score: 0%

1 -

□ Question 104 of 280

□ □

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Dashboard

Overall score: 0%

1 -

Question 104 of 280

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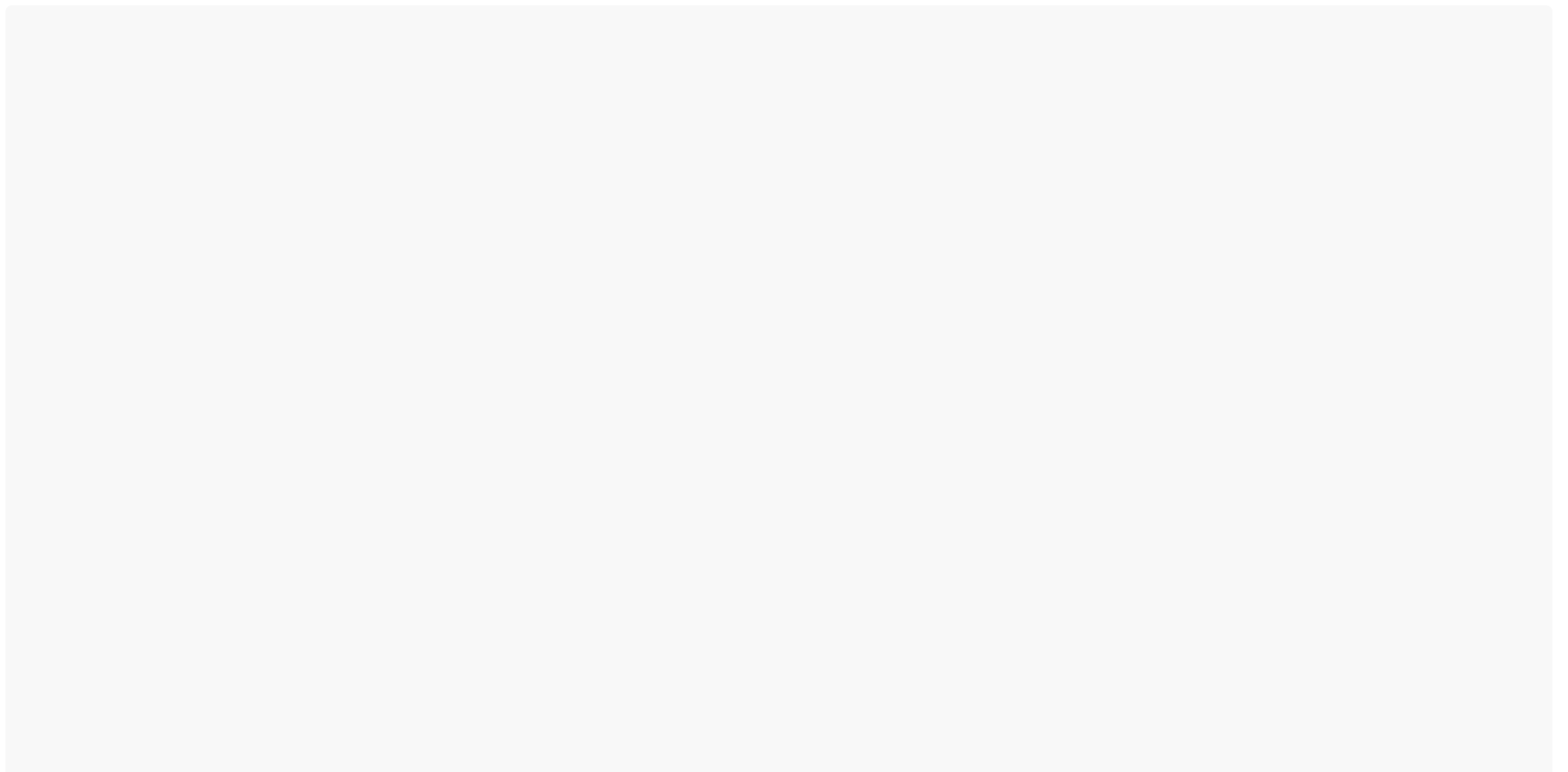
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	Neurocysticercosis
	Meningioma
	Glioblastoma multiforme
	Cerebral abscess
	Herpes simplex encephalitis

Dashboard

Overall score: 0%

1 -





Question 105 of 280

□ □

A 27-year-old caucasian woman is 28 weeks pregnant. She has been epileptic since the age of 7 and takes lamotrigine, which she has continued throughout the pregnancy. She has not had a seizure for 2 years. What must you consider in pregnant patients taking lamotrigine?

	Serum lamotrigine levels fall in the second trimester
	She must not breastfeed while taking lamotrigine
	She should be advised to stop lamotrigine
	Folic acid 400mcg should be taken throughout pregnancy
	It is protein bound and therefore drug levels increase in pregnancy

Dashboard

Overall score: 0%

1 -

Question 105 of 280

□ □

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	Folic acid 400mcg should be taken throughout pregnancy
	It is protein bound and therefore drug levels increase in pregnancy

Dashboard

Overall score: **0%**

1 -

Question 106 of 280

□ □

A 42 year old presents with 6 days of drowsiness and a gradual onset but progressive headache, initially starting in the occiput radiating to the apex. She has recently returned from Australia in holiday one week ago but has complained of poor appetite after a cough and cold since landing. She has no past medical history, takes no regular medications except the oral contraceptive pill. She is a non-smoker and drinks minimally. On examination, the patient has a full range of neck movements and no photophobia. Examination of her limbs is unremarkable. You request a CT head without contrast, which demonstrates two small areas of subarachnoid blood in right convexity. She denies any recent head trauma. Which investigation will most likely provide the conclusive diagnosis?

	CT head with contrast
	MRI head
	MR venogram
	Lumbar puncture with xanthochromia
	CT angiography

Dashboard

Overall score: 0%

1 -

Question 106 of 280

□ □

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	CT head with contrast
	MRI head
	MR venogram
	Lumbar puncture with xanthochromia
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Dashboard

Overall score: **0%**

1 -

□ Question 106 of 280

□ □

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	CT head with contrast
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	Lumbar puncture with xanthochromia
	CT angiography

Dashboard

Overall score: 0%

1 -

Asteion
Ex: 5401

C: CE
Se: 3/3
Im: 13/16
Ax: 1468.0

Acc:

Acq Tm: 09:31:29.550

BrainPLAIN.V.CONT
512x512
FC20

R

L

120.0 kV
200.0 mA
10.0 mm/0.0:1
Tilt: 0.0
1.5 s
Lin:DCM / Lin:DCM / Id:ID
W:80 L:40

P

DFOV: 21.5 x 19.7cm



□ Question 107 of 280



A 60-year-old man presents with a few hours history of severe left sided headache, described as a sharp pain behind the eye and around the temple. When his scalp is touched it elicits severe pain. He describes a transient loss of vision in the left eye that lasted for seconds during the onset of the pain. He has been feeling unwell with fevers and intermittent headaches for the past week. 2 years ago he had been diagnosed with cluster headaches and has had them intermittently, the last attack was 3 months ago.

On examination his scalp was tender to touch, and a prominent temporal artery could be felt. The temperature was 37.9°C, heart rate 90bpm, respiratory rate 22 breaths per minute, saturating 100% on air. Pupils were equal and reactive to light, no photophobia. no diplopia or ophthalmoplegia on eye movements. Rest of cranial nerve examination was normal. Fundoscopy revealed no evidence of papilloedema.

Na+	137mmol/l
K+	4.3 mmol/l
Urea	5.7 mmol/l
Creatinine	67 µmol/l
Serum glucose	5.8 mmol/l
C Reactive protein (CRP)	78mg/l
Erythrocyte Sedimentation Rate (ESR)	Awaiting results.
Haemoglobin	156 g/l
White cell count	10.2 x 10 ⁹ /L
INR	1.0

What is the next appropriate management step?

	CT Head scan
	Intravenous normal saline

	15L oxygen via a non re-breather mask
	Prednisolone 60mg orally
	200mg Ibuprofen

Dashboard

Overall score: 0%

1 -

□ Question 107 of 280



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	15L oxygen via a non re-breather mask
	Prednisolone 60mg orally
	200mg Ibuprofen

Dashboard

Overall score: **0%**

1 -

Question 108 of 280

A 28 year old female is referred to general medical clinic for review. She has a one year history of very severe right sided headaches. These are associated with eyelid swelling and lacrimation and never occur on the left. Paroxysms last around 2 minutes at a time and attacks occur upwards of 10 times per day. Attacks tend to occur every day for a week or two with a month or so between attacks. She describes no nausea or vomiting associated with her headaches.

What treatment should you offer?

<input type="checkbox"/>	Low dose carbamazepine
<input type="checkbox"/>	Trial of indomethacin
<input type="checkbox"/>	Verapamil
<input type="checkbox"/>	Topirimate
<input type="checkbox"/>	Prednisolone

Dashboard

Overall score: **0%**

1 -

Question 108 of 280

□ □

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	Low dose carbamazepine
	Trial of indomethacin
	Verapamil
	Topirimate
	Prednisolone

Dashboard

Overall score: **0%**

1 -

Question 109 of 280

A young woman (aged 23) attends the first seizure clinic following a tonic-clonic seizure 10 days previously. She is diagnosed with epilepsy based on clinical history from her boyfriend who witnessed the full seizure. On questioning she is keen to have a family but not in the immediate future.

What is the most appropriate anti-epileptic?

	Sodium valproate
	Phenytoin
	Carbamazepine
	Levetiracetam
	Lamotrigine

Dashboard

Overall score: 0%

1 -

Question 109 of 280

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	Phenytoin
	Carbamazepine
	Levetiracetam
	Lamotrigine

Dashboard

Overall score: **0%**

1 -

Question 110 of 280

A 78 year old man is brought to see you in clinic by his daughter. He has a diagnosis of Alzheimer's dementia and although currently coping well, has significantly impaired short-term memory.

Currently his daughter attends daily for all meals, cleaning, and shopping. He continues to live in his own home and is alone overnight. She has however become concerned as he continues to drive 5 miles three times a week and she is unsure if this is safe. Which of the following is the best course of action regarding his driving licence?

	He is disqualified from driving
	He is allowed to drive, but only if daughter is present
	There is no need to contact the DVLA, continue to drive
	Assess his risk factors, report to the DVLA and await advice
	He is safe if his mini mental state examination score >11

Dashboard

Overall score: 0%

1 -

Question 110 of 280

□ □

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Dashboard

Overall score: **0%**

1 -

Question 111 of 280

□ □

A 75-year-old female on aspirin for known ischaemic heart disease is being investigated for the cause of a recent transient ischaemic attack (TIA) which caused brief left sided weakness. She does not have a history of atrial fibrillation, nor has any been detected on routine telemetry.

Her MRI brain scan does not provide any evidence for acute stroke and her transthoracic echocardiogram does not demonstrate any intra-cardiac thrombus.

A carotid ultrasound study revealed a 75-85% stenosis of the right internal carotid artery. In addition to ordering a CT carotid angiogram to further investigate the lesion, the next best step in her management would be to?

	Add clopidogrel
	Commence best medical management and re-image in 6 months
	Commence an unfractionated heparin infusion
	Commence best medical therapy and refer for a carotid endarterectomy in 6-8 weeks
	Commence best medical therapy and refer for a carotid endarterectomy within 14 days

Dashboard

Overall score: 0%

1 -

Question 111 of 280

□ □

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Dashboard

Overall score: **0%**

1 -

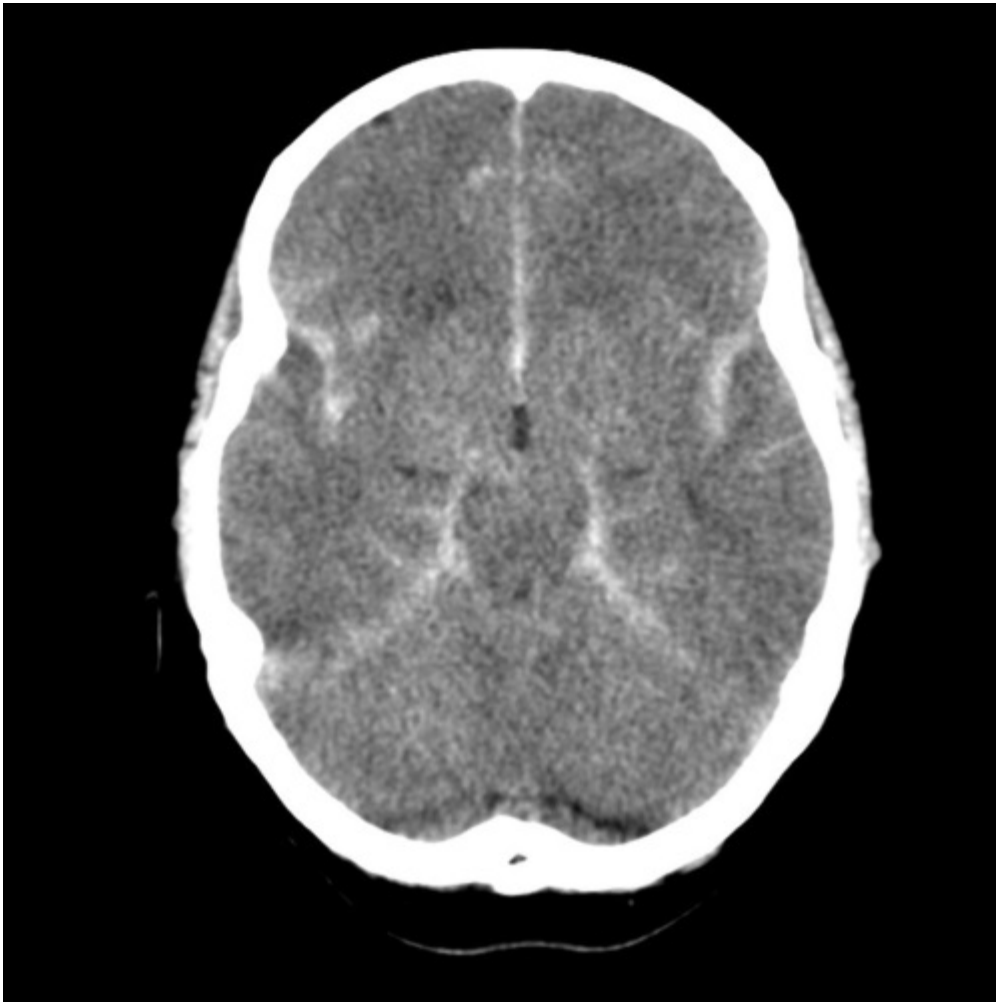
□ Question 112 of 280

□ □

A 79-year-old woman is admitted to the Emergency Department via an ambulance after being found in an unresponsive, drowsy state. Her daughter phoned her earlier in the day routinely. At this point she complained of a headache. Upon arriving at her mother's house she found her confused and lying on the floor.

On examination her GCS is 9/15 (M4V3E2), pulse 96/min and blood pressure 140/78 mmHg.

A CT head is arranged:



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What is the most likely diagnosis?

	Epidural haematoma
	Subdural haematoma
	Subarachnoid haemorrhage
	Sagittal sinus thrombosis
	Cavernous sinus thrombosis

Dashboard

Overall score: 0%

1 -

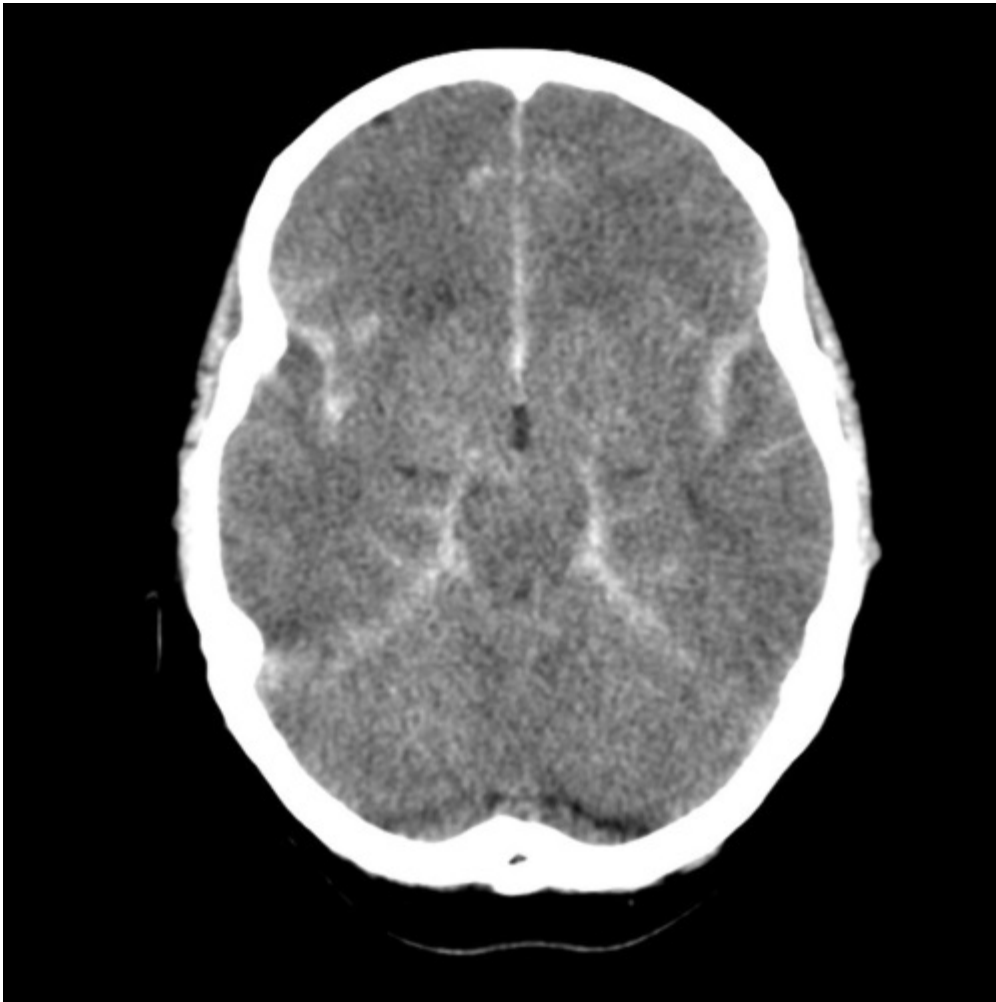
□ Question 112 of 280

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1 -

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A CT head is arranged:



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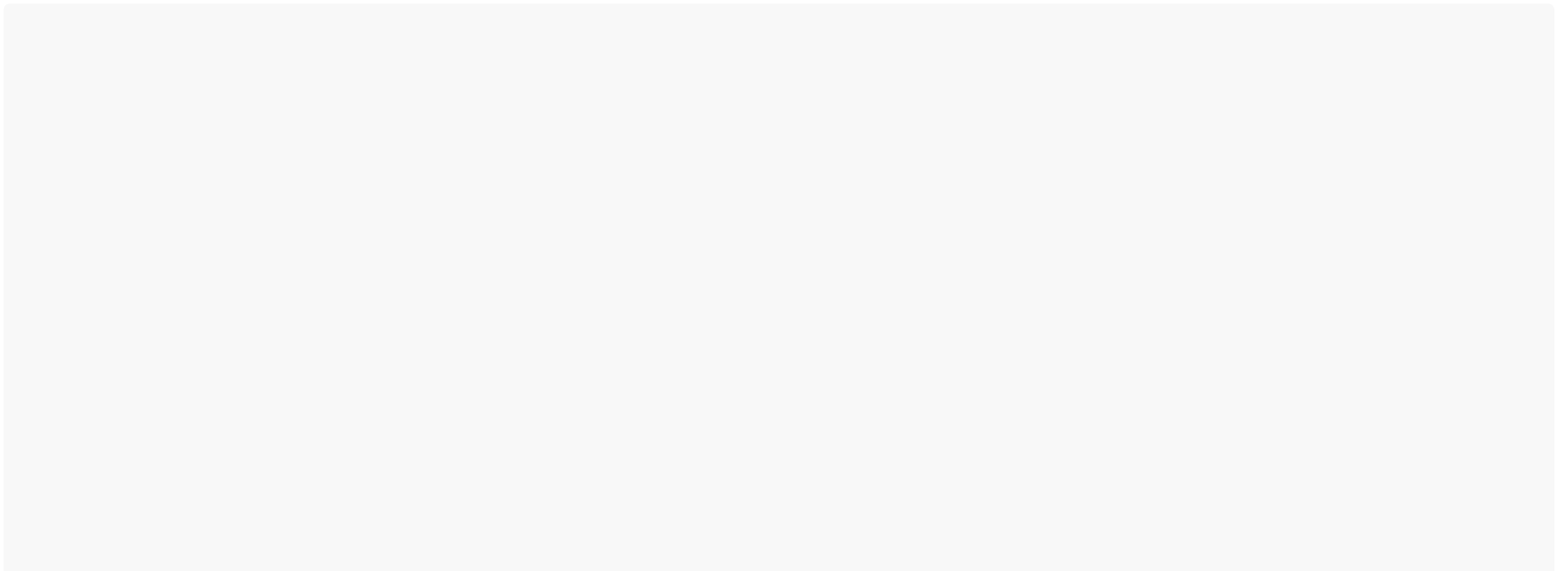
What is the most likely diagnosis?

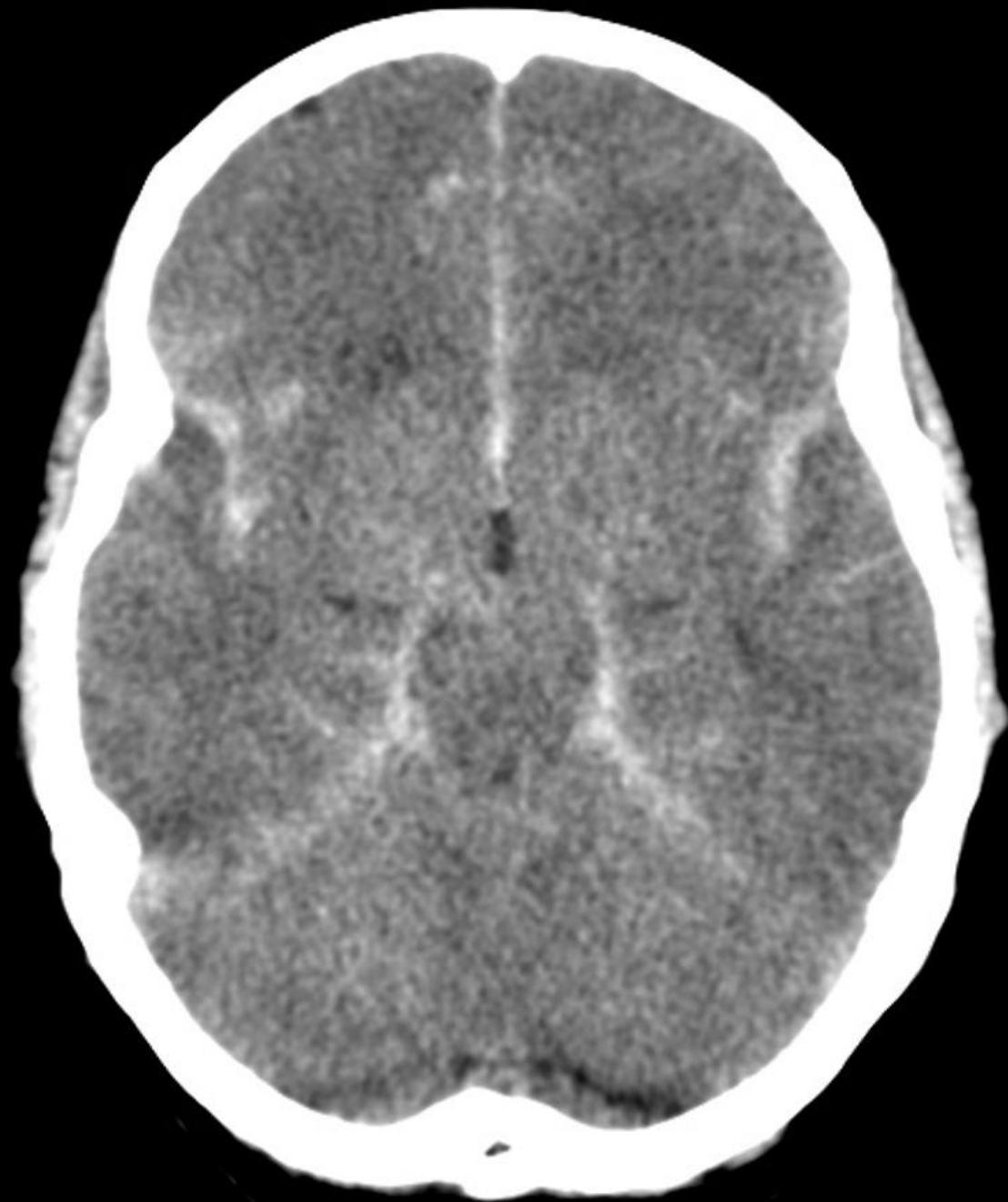
	Epidural haematoma
	Subdural haematoma
	Subarachnoid haemorrhage
	Sagittal sinus thrombosis
	Cavernous sinus thrombosis

Dashboard

Overall score: 0%

1 -





□ Question 113 of 280

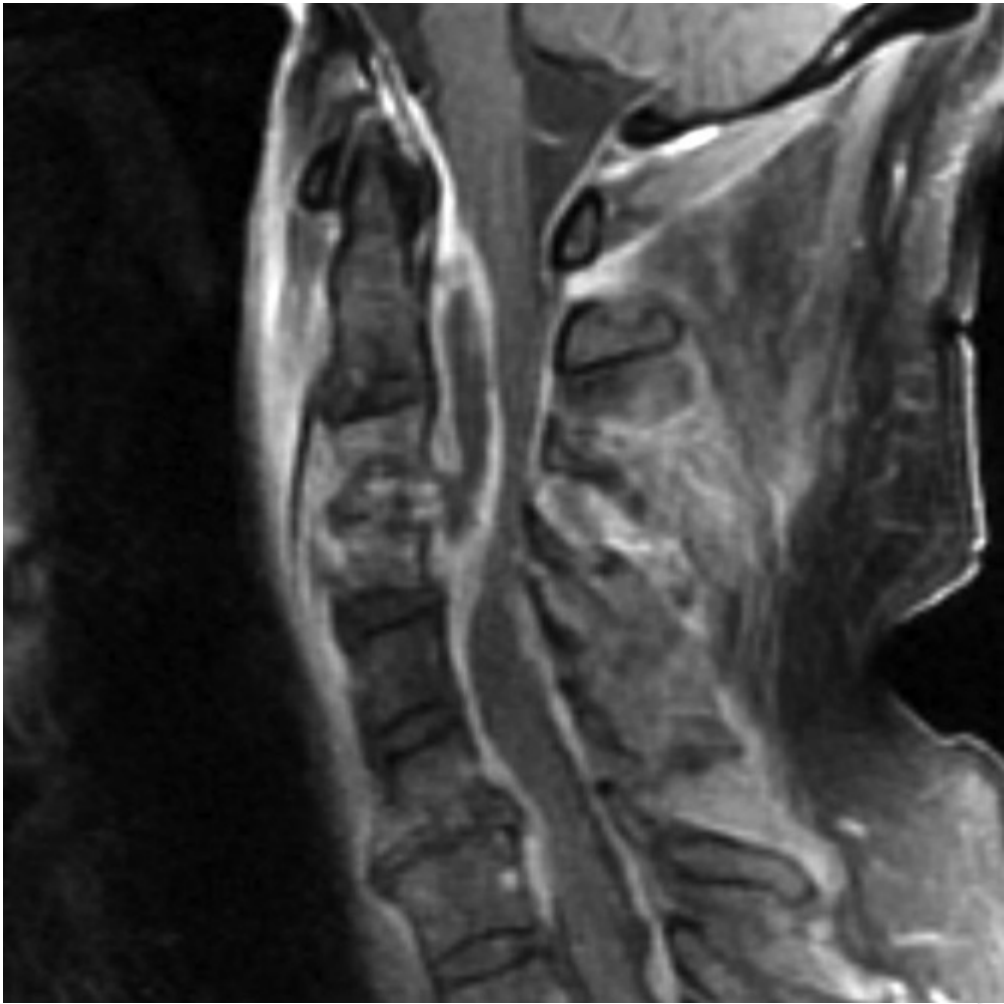
□ □

A 54-year-old man presents with neck pain and feeling generally unwell. This has been getting progressively worse over the past two weeks and is now 'unbearable'. He feels hot and also complains of headaches.

He emigrated from Pakistan 30 years ago. He smokes 20 cigarettes/day and does not drink alcohol.

On examination pulse is 102/min, blood pressure 124/74 mmHg and temperature 37.9°C. He has weakness in both arms

MRI of his cervical spine is shown below:



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What is the most likely diagnosis?

	Cervical disc prolapse
	Syringomyelia
	Cervical epidural abscess
	Meningitis
	Tuberculosis

Dashboard

Overall score: 0%

1 -

□ Question 113 of 280

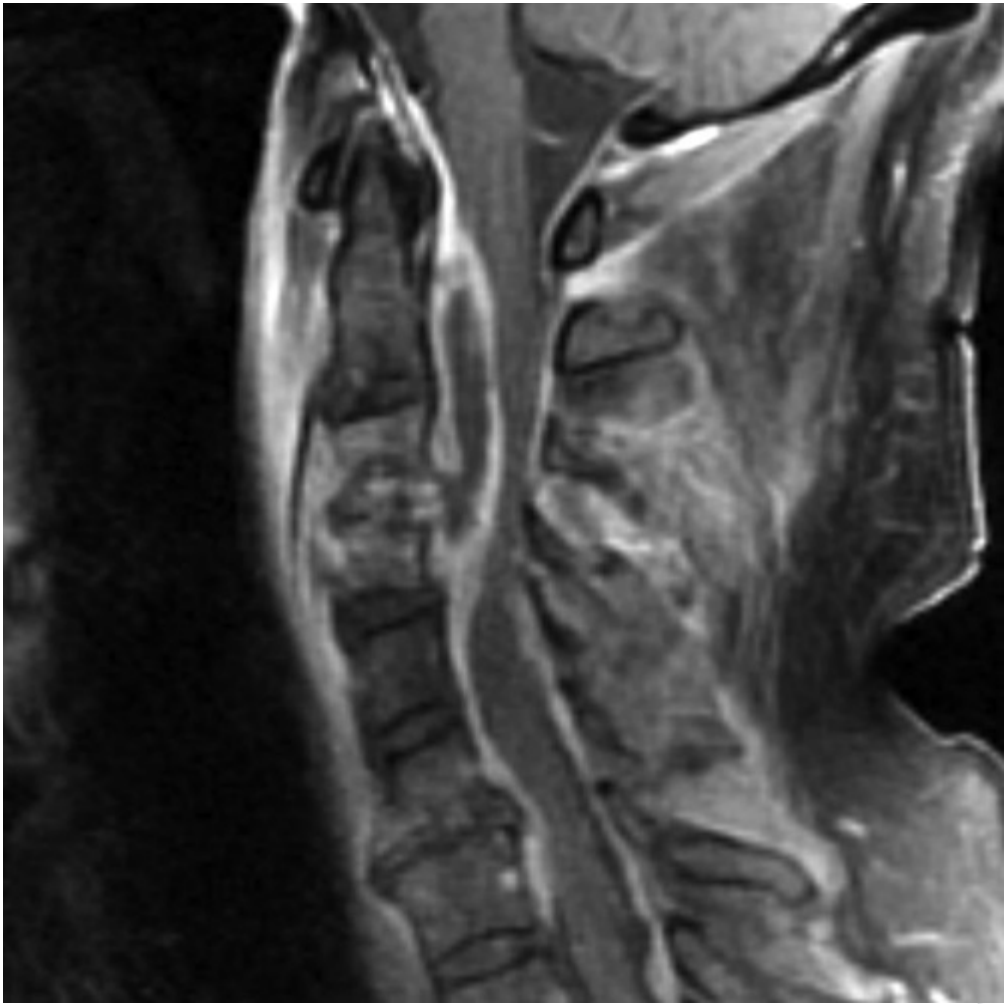
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On examination pulse is 102/min, blood pressure 124/74 mmHg and temperature 37.9°C. He has weakness in both arms

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© Image used on license from Radiopaedia



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	Syringomyelia
	Cervical epidural abscess
	Meningitis
	Tuberculosis

Dashboard

Overall score: 0%

1 -

□ Question 114 of 280

□ □

An 88-year-old woman is brought in by her daughter as her memory has been deteriorating over the past year. Upon clarification with her daughter, it is confirmed that the patient has deteriorated over many months and has not had an acute illness. She has no significant past medical history apart from an appendicectomy when she was a teenager. On examination, the patient is comfortable at rest, has a temperature of 36.8 degrees Celcius, heart rate of 70 beats per minute and blood pressure of 115/90mmHg. What should be included in her initial screen apart from haematology and biochemistry?

	Thyroid function tests, and serum B12 and folate
	Thyroid function tests, serum B12 and folate, syphilis, and HIV
	Thyroid function tests, serum B12 and folate, lumbar puncture, midstream urine
	Thyroid function tests, serum B12 and folate, syphilis, and midstream urine
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Dashboard

Overall score: 0%

1 -

Question 114 of 280

□ □

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Dashboard

Overall score: **0%**

1 -

Question 115 of 280

□ □

A 72-year-old male presents to the Parkinson's clinic with his wife, reporting increasing frequency and duration of 'off' periods. The couple finds these episodes extremely debilitating and occurs up to 11 times a day. The patient was diagnosed with Parkinson's disease 12 years ago. As a relatively young patient on diagnosis, he was commenced on ropinirole, which he continued for 5 years, before being prescribed Sinemet 6 times a day and entacapone for the following 7 years. Over past 2 years, the 'off' episodes have gradually increased in frequency in addition to the development of very mild involuntary jaw movements. He is very low in mood and has presented to the emergency department with two episodes of attempted paracetamol overdoses. He would like a more effective treatment. What would you recommend?

	Deep brain stimulation
	Subcutaneous apomorphine
	Reintroduce ropinirole at higher doses
	Palliative care involvement
	Trihexyl

Dashboard

Overall score: 0%

1 -

Question 115 of 280

□ □

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1 -

Question 115 of 280

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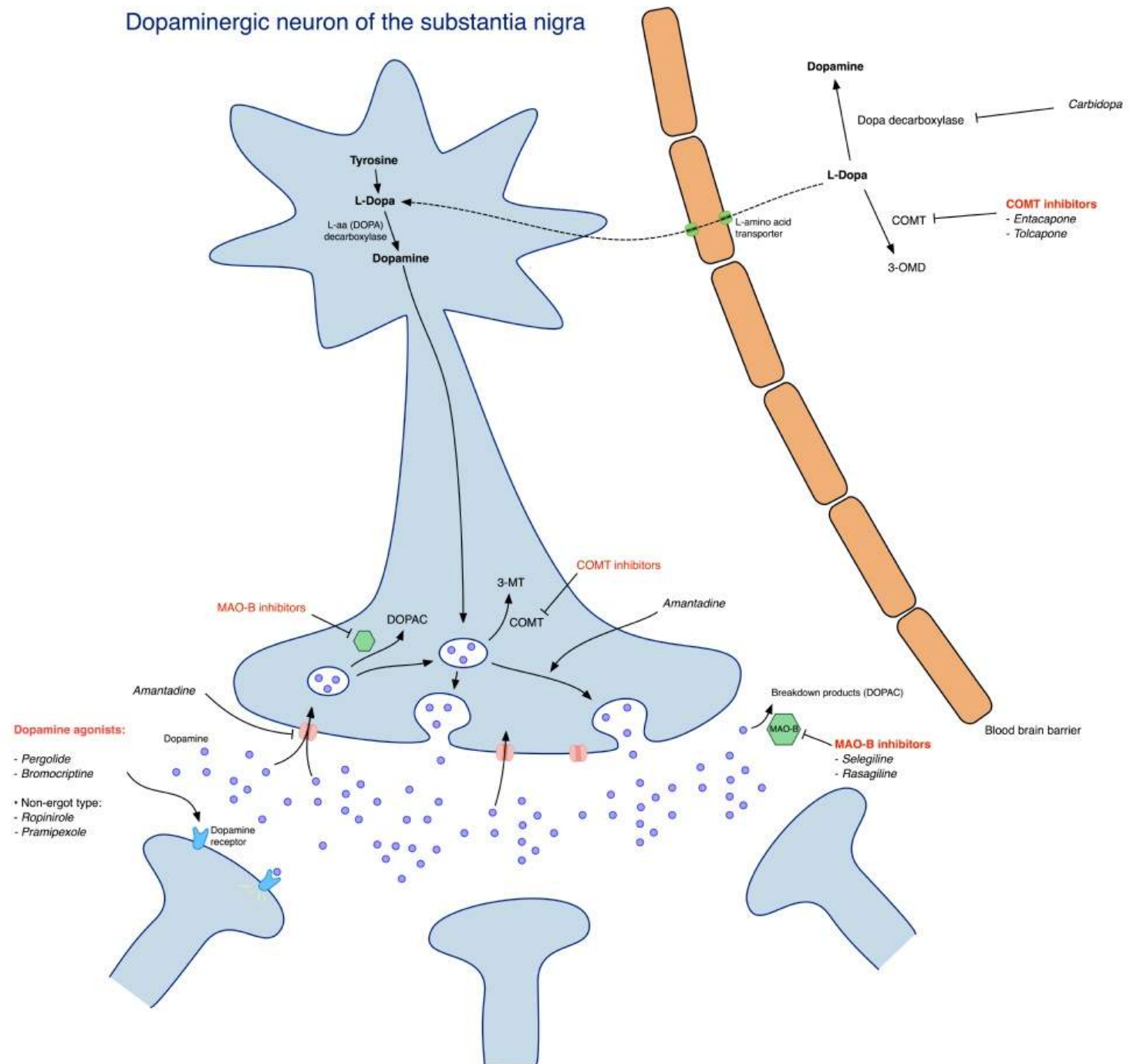
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	Subcutaneous apomorphine
	Reintroduce ropinirole at higher doses
	Palliative care involvement
	Trihexyl

Dashboard

Overall score: **0%**

1 -

Dopaminergic neuron of the substantia nigra



□ Question 116 of 280



A 25 year old man presents to A+E in a comatose state. He was found by his university flatmate collapsed on the floor. His flatmate states that the man had been behaving bizarrely in the last 24 hours and had been quite agitated and aggressive at times. When you examine him he has a GCS of 8 (E 2 V 1 M 5). He has a temp of 39.4°C, heart rate 120/min, blood pressure 178/89 mmHg, sats 98% on room air and respiratory rate 20/min. Chest clear abdomen soft and non-tender, bowel sounds present. Globally greatly increased tone in all 4 limbs.

When looking at his previous electronic notes the only information that you can find is a recent admission to a psychiatric hospital where a diagnosis of paranoid schizophrenia was established.

CT Brain: normal

Hb	15.4 g/dl
Platelets	232 * 10 ⁹ /l
WBC	11.5 * 10 ⁹ /l

Na ⁺	143 mmol/l
K ⁺	4.1 mmol/l
Urea	8.1 mmol/l
Creatinine	101 µmol/l

Bilirubin	14 µmol/l
ALP	63 u/l
ALT	28 u/l
Calcium	2.64 mmol/l
Albumin	41 g/l
Creatine kinase	21,000 iu/l

Serum glucose	6.4 mmol/l
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Lumbar Puncture:

Glucose	4.9 mmol/l
Protein	0.3g/l
Culture	nil organisms found
Opening pressure	21 mmHg

What is the most likely diagnosis?

<input type="radio"/>	Viral meningitis
<input type="radio"/>	Serotonin syndrome
<input type="radio"/>	Neuroleptic malignant syndrome
<input type="radio"/>	Bacterial meningitis
<input type="radio"/>	Malignant hyperthermia

Dashboard

Overall score: 0%

1 -

□ Question 116 of 280



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	Neuroleptic malignant syndrome
	Bacterial meningitis
	Malignant hyperthermia

Dashboard
Overall score: 0% 1 -

□ Question 117 of 280

□ □

A 37-year-old woman presents with left-sided pain shoulder pain. This has been present for around 6 months and is described variably as a 'toothache' or an 'electric shock' sensation which extends from her neck to the elbow.

On examination there is reduced power when abducting the left shoulder and reduced sensation to light touch just inferior to the deltoid muscle. The biceps reflex on the left side is absent. Pain and temperature sensation are normal in the left arm. Examination of the right arm is normal.

An MRI neck is requested:



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What is the most likely diagnosis?

	Bony metastases
	Brown-Sequard syndrome
	Arnold-Chiari malformation
	Syringomyelia
	Cervical disc prolapse

Dashboard

Overall score: 0%

1 -

□ Question 117 of 280

□ □

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© Image used on license from Radiopaedia



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	Bony metastases
	Brown-Sequard syndrome
	Arnold-Chiari malformation
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Dashboard

Overall score: **0%**

1 -

Question 117 of 280



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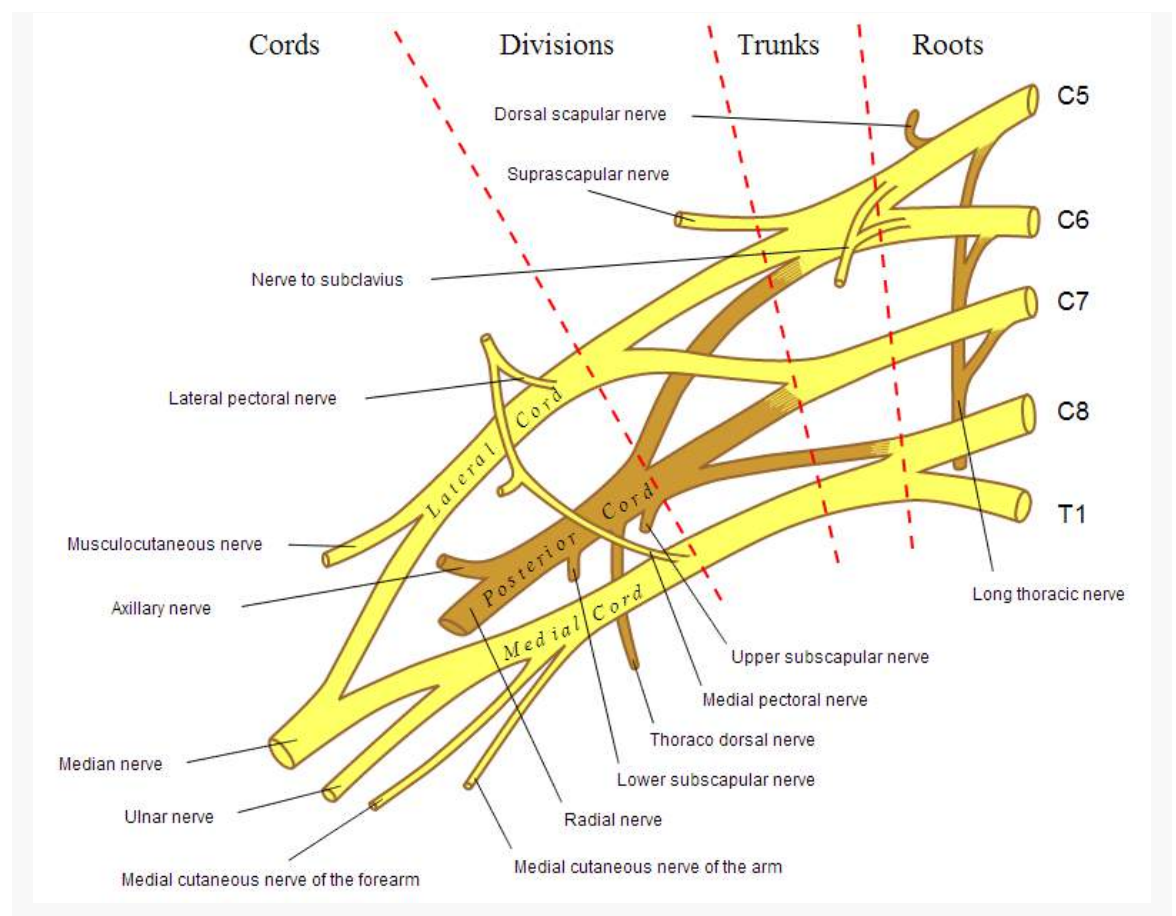


What is the most likely diagnosis?

	Bony metastases
	Brown-Sequard syndrome
	Arnold-Chiari malformation
	Syringomyelia
	Cervical disc prolapse

Overall score: **0%**

1 -



Question 118 of 280

□ □

A 45 year old man develops weakness of the extensors in the wrist and digits of his left upper limb over a week. Over the next 2 months he also notices weakness of the small muscles of hands on the right side, and that he is progressively unable to dorsiflex his right foot. On examination, he has wasting and 2/5 power in the left wrist and digit extensors. On the right he has clawing of the right ring and little fingers along with wasting of the small muscles of the hand on that side (except the thenar eminence and the first two lumbricals, which are spared). He has a right foot drop along with wasting of the anterior tibial and perineal muscles on that side. Fasciculations are seen in all of the areas of weakness. Sensory examination and reflexes are normal, along with no clonus. Plantars are down-going. The remainder of the examination are normal. Nerve conduction studies show conduction block. What is first-line maintenance treatment for this condition?

	Riluzole
	Intravenous immunoglobulin
	Pyridostigmine
	Steroids
	Beta-interferon

Dashboard

Overall score: 0%

1 -

Question 118 of 280

□ □

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Dashboard

Overall score: **0%**

1 -

Question 119 of 280

□ □

An 81-year-old lady with a history of congestive cardiac failure was assessed in accident and emergency and clinically diagnosed with an acute ischaemic stroke. Her main deficits were slurred speech and left sided facial droop with some loss of fine motor control in the left hand. On admission, her blood pressure was 185/70mmHg with a heart rate of 95 beats per minute in sinus rhythm.

The initial CT scan of her brain showed some evidence of chronic small vessel ischaemia, but no acute pathology, in particular no haemorrhage was seen. Which of the following combinations of investigations should be carried out during the acute admission?

	MRI, transthoracic echocardiogram (TTE), cardiac telemetry and carotid duplex study
	Transoesophageal echocardiogram (TOE), CT cerebral angiogram and carotid duplex study
	CT scan, fasting lipids and a video fluoroscopy swallow study
	Fasting glucose, Electroencephalogram (EEG), MRI and thrombophilia screen
	Thrombophilia screen, MRI and a TTE

Dashboard

Overall score: 0%

1 -

Question 119 of 280

□ □

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	MRI, transthoracic echocardiogram (TTE), cardiac telemetry and carotid duplex study
	Transoesophageal echocardiogram (TOE), CT cerebral angiogram and carotid duplex study
	CT scan, fasting lipids and a video fluoroscopy swallow study
	Fasting glucose, Electroencephalogram (EEG), MRI and thrombophilia screen
	Thrombophilia screen, MRI and a TTE

Dashboard

Overall score: **0%**

1 -

□ Question 120 of 280

□ □

A 53-year-old lady was admitted to the medical admission unit having presented to the Emergency Department with a severe headache which had developed over the last five days. She described the headache as a continual dull pain across the front of her head and was significantly worsened when she sat up as well as when she coughed or strained. It was alleviated only when she lied down in a dark room; paracetamol 1g QDS and ibuprofen 400mg TDS did not provide any relief. She denied the presence of nausea or vomiting, her vision was not affected and other than feeling tired she did not complain of any other symptoms. Her past medical history was comprised of non-classical migraines and hypothyroidism for which she was prescribed levothyroxine 175mcg OD. Seven days ago she was admitted with a headache, fever and photophobia; review of her medical notes revealed the following results from the previous admission:

Hb	142 g/l
Platelets	$326 \times 10^9/l$
WBC	$11.2 \times 10^9/l$

Glucose	5.4 mmol/l
ESR	32 mm/hr
CRP	46 mg/l
PTT	12.2 (NR 12-14s)
APTT	44s (NR 300-46s)
Fibrinogen	5.2 (NR 2-4 g/l)

Urine MCS: NAD

Blood MCS: NAD

CT Head: normal intracranial appearances; no space occupying lesion or haemorrhage identified

Lumbar puncture:

Protein	0.3g (NR 0.2-0.4 g/L)
Glucose	3.6 mmol/l
WCC	8 (<5/mm ³)
Opening pressure	15 (NR 10-20 cmH ₂ O)
MCS	NAD

Examination revealed the presence of a female in a dark room lying flat. Her temperature was 36.6°C, heart rate 77bpm, respiratory rate 16/min and blood pressure 136/78 mmHg. Examination her cardiovascular and respiratory systems were unremarkable. Examination of her neurological system revealed the presence of normal functioning cranial nerves 2-12 with unremarkable fundoscopy; there was no neck stiffness or photophobia objectively. There was no neck stiffness and Kernig's sign was negative. Examination of her peripheral neurological system was unremarkable.

What is the single next best management option?

<input type="radio"/>	Organise urgent cranial MR venogram scan
<input type="radio"/>	Organise urgent cranial MRI scan
<input type="radio"/>	Commence therapy with sumatriptan
<input type="radio"/>	Administer epidural blood patch
<input type="radio"/>	Send CSF for xanthochromia analysis

Dashboard

Overall score: **0%**

1 -

Question 120 of 280

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Dashboard

Overall score: **0%**

1 -

Question 121 of 280

□ □

An 18 year old man presents to your follow up clinic after a first episode of generalised tonic-clonic seizures, witnessed by his mother lasting for 4 minutes, involving all 4 limbs, before spontaneously terminating. He was initially referred to a first fit clinic and underwent an EEG and MRI, neither of which demonstrated any significant abnormalities. He has now returned to discuss his results and further treatment. The patient and his family realise that there are many ways to manage seizures and are happy to take your recommendation. What is your treatment?

	No treatment
	Sodium valproate
	Lamotrigine
	Levetirecetam
	Carbamazepine

Dashboard

Overall score: 0%

1 -

Question 121 of 280

□ □

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	No treatment
	Sodium valproate
	Lamotrigine
	Levetirecetam
	Carbamazepine

Dashboard

Overall score: **0%**

1 -

□ Question 122 of 280

□ □

An 85 year old woman was referred by her General Practitioner to the stroke team on an urgent outpatient basis after her rest home staff reported a unusual episode the previous week. The patient normally suffered from mild dementia but was independent with activities of daily life with minimal assistance from care staff. One week previously, she had been found unusually drowsy in an armchair at her home. Staff recalled that she had been inconsistent with following commands and in particular was unable to raise her left arm in the air and was unable to stand. The drowsiness and arm weakness had resolved within 30 minutes, however the patient had subsequently been more confused than normal with reduced mobility. On direct questioning, rest home staff than a few days prior to the above episode the patient had lost her balance and had sat down heavily on the ground. The care worker with her at the time was certain that the patient had not hit her head during this incident.

Past medical history included mild dementia, myocardial infarction and atrial fibrillation. Regular medications included aspirin 75 mg daily, ramipril 2.5 mg daily, bisoprolol 2.5 mg daily, simvastatin 20 mg daily and warfarin (target INR 2-3). Review of recent blood test monitoring showed that the patients INR had been well controlled over recent months with no results outside of the therapeutic range. The patient did not drink and was a long-term ex-smoker. As mentioned above, the patient normally needed minimal assistance with self-care and was fully continent.

Examination in clinic demonstrated a significant cognitive impairment (abbreviated mental test score 4/10) but without evidence of dysphasia. Pupils were equal and reactive to light with no papilloedema on fundoscopy. There was a full range of conjugate eye movements. No facial weakness or sensory loss was demonstrated. Tongue and palate function was unremarkable with no weakness of trapezius muscle. Examination of the peripheral nerves was unremarkable except for possible slight pronator drift in the left arm and an up going left plantar response. Cardiovascular examination was unremarkable except for an irregular pulse. Respiratory and abdominal examination was unremarkable.

Results of investigations performed at the time of clinic assessment are given below.

Electrocardiogram: atrial fibrillation at rate 80 bpm, normal axis, inferior T wave inversion

Chest x-ray: clear lung fields

Carotid doppler: no significant stenosis in right internal carotid artery; 50 % stenosis in left internal carotid

Transthoracic echocardiogram: mild left ventricular systolic impairment, normal valvular function, no mural thrombus

What is most likely finding on CT brain scan performed after clinic review?

	Sub-arachnoid haemorrhage
	Cerebral infarction
	Intracerebral haemorrhage
	Normal pressure hydrocephalus
	Sub-dural haematoma

Dashboard

Overall score: **0%**

1 -

□ Question 122 of 280

□ □

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What is most likely finding on CT brain scan performed after clinic review?

	Sub-arachnoid haemorrhage
	Cerebral infarction
	Intracerebral haemorrhage
	Normal pressure hydrocephalus
	Sub-dural haematoma

Dashboard

Overall score: **0%**

1 -

Question 123 of 280

□ □

A 56 year-old consultant surgeon has recently been diagnosed with idiopathic Parkinson's disease, and attends clinic for review.

You read the previous clinic letter and see that he presented with tremor affecting mainly the right hand, which forced him to stop operating. On examination he also had some bradykinesia and rigidity of the right hand. He was started on co-beneldopa 100/25, initially one tablet three times daily, with instructions to up-titrate as tolerated.

When you see him today, he is concerned that there has been no improvement in the tremor. This is causing him considerable distress as he hopes to return to clinical work. His motor control is otherwise good, and throughout the day and night he has no difficulty with 'off' periods or freezing. He currently takes co-beneldopa 100/25, two tablets three times daily, and reports no complications.

On examination there is a resting tremor of the right hand. There is no discernable rigidity or bradykinesia.

What is the best treatment option?

	Increase dose of co-beneldopa
	Increase frequency of co-beneldopa
	Add procyclidine
	Add entacapone
	Add selegiline

Dashboard

Overall score: 0%

1 -

Question 123 of 280

□ □

A 56 year-old consultant surgeon has recently been diagnosed with idiopathic Parkinson's disease, and attends clinic for review.

You read the previous clinic letter and see that he presented with tremor affecting mainly the right hand, which forced him to stop operating. On examination he also had some bradykinesia and rigidity of the right hand. He was started on co-beneldopa 100/25, initially one tablet three times daily, with instructions to up-titrate as tolerated.

When you see him today, he is concerned that there has been no improvement in the tremor. This is causing him considerable distress as he hopes to return to clinical work. His motor control is otherwise good, and throughout the day and night he has no difficulty with 'off' periods or freezing. He currently takes co-beneldopa 100/25, two tablets three times daily, and reports no complications.

On examination there is a resting tremor of the right hand. There is no discernable rigidity or bradykinesia.

What is the best treatment option?

	Increase dose of co-beneldopa
	Increase frequency of co-beneldopa
	Add procyclidine
	Add entacapone
	Add selegiline

Dashboard

Overall score: **0%**

1 -

Question 123 of 280

A 56 year-old consultant surgeon has recently been diagnosed with idiopathic Parkinson's disease, and attends clinic for review.

You read the previous clinic letter and see that he presented with tremor affecting mainly the right hand, which forced him to stop operating. On examination he also had some bradykinesia and rigidity of the right hand. He was started on co-beneldopa 100/25, initially one tablet three times daily, with instructions to up-titrate as tolerated.

When you see him today, he is concerned that there has been no improvement in the tremor. This is causing him considerable distress as he hopes to return to clinical work. His motor control is otherwise good, and throughout the day and night he has no difficulty with 'off' periods or freezing. He currently takes co-beneldopa 100/25, two tablets three times daily, and reports no complications.

On examination there is a resting tremor of the right hand. There is no discernable rigidity or bradykinesia.

What is the best treatment option?

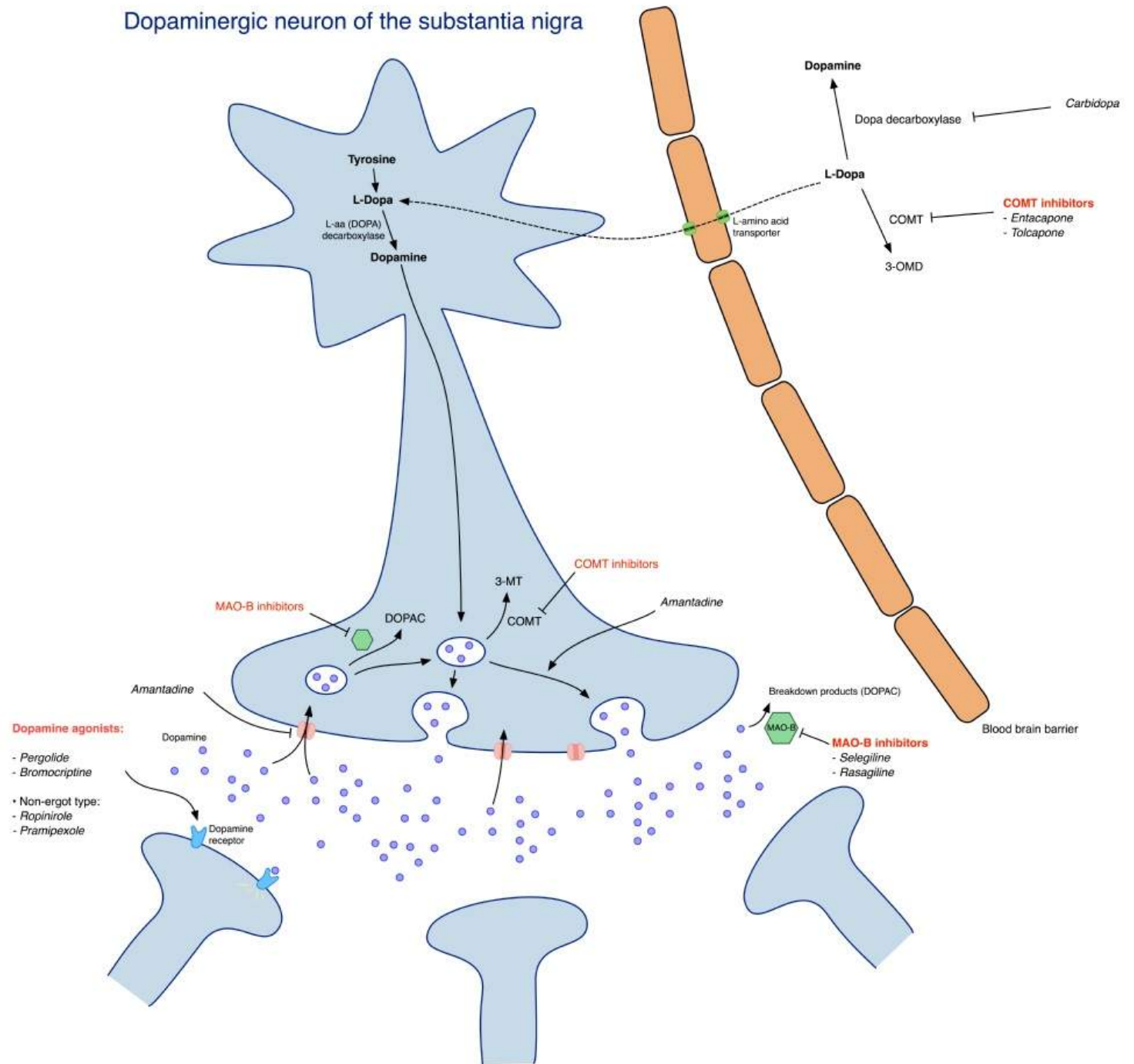
	Increase dose of co-beneldopa
	Increase frequency of co-beneldopa
	Add procyclidine
	Add entacapone
	Add selegiline

Dashboard

Overall score: 0%

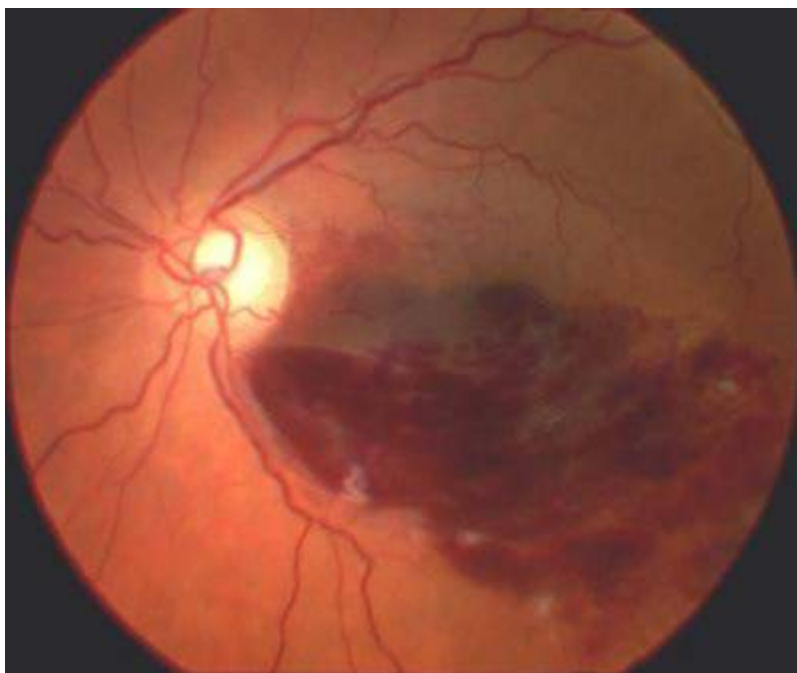
1 -

Dopaminergic neuron of the substantia nigra



Question 124 of 280

A man presents with a sudden worsening of his vision in the right eye.



What does fundoscopy show?

<input type="checkbox"/>	Vitreous haemorrhage
<input type="checkbox"/>	Branch retinal vein occlusion
<input type="checkbox"/>	Choroidal naevus
<input type="checkbox"/>	Retinoschisis
<input type="checkbox"/>	Retinal detachment

Dashboard

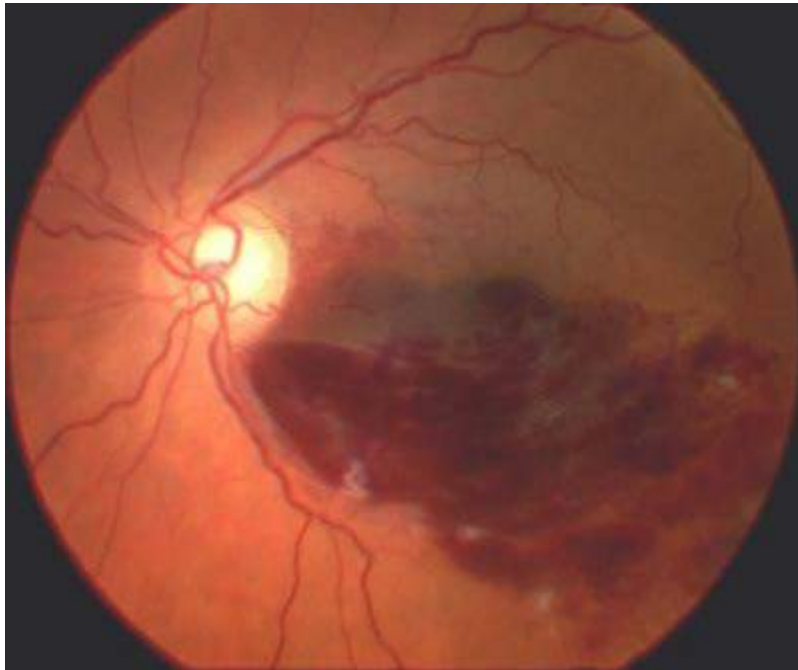
Overall score: **0%**

1 -

□ Question 124 of 280

□ □

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What does fundoscopy show?

	Vitreous haemorrhage
	Branch retinal vein occlusion
	Choroidal naevus
	Retinoschisis
	Retinal detachment

Dashboard

Overall score: **0%**

1 -

Question 125 of 280

□ □

A patient with refractory focal epilepsy on two agents is commenced on levetiracetam in addition. Which adverse effect should patients that have been commenced on this drug most importantly be warned about?

<input type="checkbox"/>	Oral hairy leukoplakia
<input type="checkbox"/>	Weight gain
<input type="checkbox"/>	Irritability and aggression
<input type="checkbox"/>	QT-interval prolongation
<input type="checkbox"/>	Nystagmus

Dashboard

Overall score: **0%**

1 -

Question 125 of 280

□ □

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	Oral hairy leukoplakia
	Weight gain
	Irritability and aggression
	QT-interval prolongation
	Nystagmus

Dashboard

Overall score: **0%**

1 -

□ Question 126 of 280



A 45-year-old lady was admitted to the Medical Admission Unit with a 16-hour history of weakness. Two days prior to the admission she experienced a sensation of double vision and shortly afterwards had become more unsteady when walking. The weakness developed initially in her arms and was shortly followed by weakness in her legs. Her past medical history included a history of coeliac disease for which she adhered to a strict gluten-free diet, but she was otherwise fit and well.

On examination, she was not distressed and was fully orientated to her surroundings. She had a temperature of 37.6°C, a heart rate of 88/min, a respiratory rate of 18/min and a blood pressure of 182/82 mmHg. The cardiovascular and respiratory examination was otherwise unremarkable. Examination of the abdomen revealed a mass arising from the symphysis pubis. Examination of her cranial nerves revealed a failure of bilateral external gaze, as well as diplopia on asking the patient to fixate down and in. Her pupils were dilated but reactive. Fundoscopy revealed no abnormalities, and cranial nerve examination was otherwise unremarkable. The tone was reduced in all muscle groups, with a power of grade 3/5 in all muscle groups. Reflexes were absent in all limbs and plantar responses were normal. She was unable to mobilise independently and an ataxia was noted.

Initial investigations revealed the following:

Hb	132 g/l
Platelets	222 * 10 ⁹ /l
WBC	5.8 * 10 ⁹ /l
ESR	16 mm/hr

Na ⁺	139 mmol/l
K ⁺	3.7 mmol/l
Urea	4.3 mmol/l
Creatinine	77 µmol/l
Bilirubin	11 µmol/l
ALP	101 u/l

ALT	22 u/l
Glucose	6.0 mmol/l
CRP	22 mg/l

Appearance	Clear
Glucose	4.5 mmol/l
Protein	0.6 g/l
White cells	3 / mm ³

CT brain scan: normal appearances, no evidence of haemorrhage, midline shift or space occupying lesion.

What is the single investigation most likely to lead to a diagnosis?

<input type="radio"/>	Anti Jo1 antibodies
<input type="radio"/>	Anticholinesterase antibodies
<input type="radio"/>	Anti GQ1b antibodies
<input type="radio"/>	Anti GM1 antibodies
<input type="radio"/>	Antinuclear antibodies

Dashboard

Overall score: **0%**

1 -

□ Question 126 of 280



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CT brain scan: normal appearances, no evidence of haemorrhage, midline shift or space occupying lesion.

What is the single investigation most likely to lead to a diagnosis?

	Anti Jo1 antibodies
	Anticholinesterase antibodies
	Anti GQ1b antibodies
	Anti GM1 antibodies
	Antinuclear antibodies

Dashboard

Overall score: **0%**

1 -

Question 127 of 280



A 42 year old male presents with double vision and weakness in his fingers, which he noticed when he repeated dropped his pen when trying to write at work. His symptoms appear to have onset over the past few days. He has no past medical history other than a recent episode of diarrhoea and vomiting about two weeks ago. He reports no limb weakness and no sensory loss. He denies any back pain or palpitations. On examination, there is a 3/5 weakness in finger flexion, finger extension and wrist extension in both hands, with no fatiguability. No reflexes present in the lower or upper limbs. There is no ptosis or nystagmus but reduced eye movements in all directions. His finger-nose test demonstrates reduced coordination bilaterally and the patient has too little confidence to walk. Which investigation is diagnostic?

	Anti-GM1 antibody
	Anti-GQ1b antibody
	MRI brain and whole spine
	Anti-MUSK (muscle specific kinase) antibody
	Anti-acetylcholine receptor antibody

Dashboard

Overall score: 0%

1 -

Question 127 of 280



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	Anti-GM1 antibody
	Anti-GQ1b antibody
	MRI brain and whole spine
	Anti-MUSK (muscle specific kinase) antibody
	Anti-acetylcholine receptor antibody

Dashboard

Overall score: 0%

1 -

Question 128 of 280

□ □

A 70 year old male presents with 3 month history of left foot drop. He complains of having to lift his thighs higher than normal to accommodate this pathology. On examination, he has a high stepping gait. Power is normal in all movements except left ankle dorsiflexion (2/5) and eversion (2/5). Ankle inversion is intact (5/5), ankle jerks are present and plantars are downgoing. He reports reduced sensation on the dorsum of his foot. What is the diagnosis?

<input type="checkbox"/>	L5 radiculopathy
<input type="checkbox"/>	Common peroneal palsy
<input type="checkbox"/>	Functional neurology
<input type="checkbox"/>	Sciatic nerve compression
<input type="checkbox"/>	Lumbar plexopathy

Dashboard

Overall score: **0%**

1 -

Question 128 of 280

□ □

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	L5 radiculopathy
	Common peroneal palsy
	Functional neurology
	Sciatic nerve compression
	Lumbar plexopathy

Dashboard

Overall score: **0%**

1 -

□ Question 129 of 280



A 36 year old male presents to your outpatient clinic with a progressive history over the past 5 years of increasing, progressive 'clumsiness'. His work colleagues had a long running joke with him that he is poorly coordinated for about the past five years but in recent weeks, he has noticed that he is unable to write legibly or even hold a key still using either hand to open a door. He denies any recent weight loss or night sweats, is otherwise healthy with no other past medical history. He is a lifelong non-smoker with a minimal alcohol history and lives with his wife and 2 children.

On examination, his cranial nerves were unremarkable except for mild multidirectional nystagmus at primary gaze. Fundoscopy was normal. Limb examination revealed significant impairment of finger-nose and heel-shin testing. His gait, tone, power, sensation and reflexes were normal with downgoing plantars. A brief mini-mental state examination scored 30/30. An MRI head is awaited. His blood tests are as below:

Hb	15.8 g/dl
Platelets	$323 \times 10^9/l$
WBC	$6.5 \times 10^9/l$

Na ⁺	141 mmol/l
K ⁺	4.9 mmol/l
Urea	6.6 mmol/l
Creatinine	85 μ mol/l
CRP	2 mg/l
Creatine kinase	223 IU/l (50-335)
TSH	3.3 mu/l
Free T4	17 nmol/l
HIV	negative
Anti-neuronal antibodies	negative

Which investigation is likely to yield the diagnosis?

	Neurogenetics testing
	CT chest, abdomen, pelvis
	Vitamin B12 and folate levels
	Lumbar puncture for cerebrospinal fluid including 14-3-3 and S100
	Anti-GQ1b antibodies

Dashboard

Overall score: 0%

1 -

□ Question 129 of 280



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	Lumbar puncture for cerebrospinal fluid including 14-3-3 and S100
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Dashboard

Overall score: 0%

1 -

Question 130 of 280

□ □

A 69-year-old male presenting with a 4-month history of progressive 'droopiness' of his left eyelid. He reports that in the last 2 weeks, he has been unable to lift his eyelid at all, which he says is fortunate considering he gets double vision now when he lifts his eyelid with his fingers. He underwent a renal transplant in 1988, which continues to function well, and previously had a squamous cell and malignant melanoma resected 2 and 5 years ago respectively.

On examination, you note complete ptosis, loss of vertical eye movements and loss of adduction in his left eye. On head tilt to the right, he is unable to depress left eye. His right eye demonstrates full eye movements. The left pupil is unreactive and larger in diameter compared to the right. There is also loss of sensation at the left nasal skin fold and left forehead with sparing of his left chin. He has no facial weakness, hearing loss or palatal asymmetry. He denies headache or retroorbital pain.

Where is the likely lesion?

	Left ocular neuromuscular junction
	Left cavernous sinus
	Left superior orbital fissure
	Cerebral aqueduct
	Left midbrain

Dashboard

Overall score: 0%

1 -

Question 130 of 280

□ □

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	Left cavernous sinus
	Left superior orbital fissure
	Cerebral aqueduct
	Left midbrain

Dashboard

Overall score: **0%**

1 -

Question 131 of 280

□ □

A 42-year-old man attends the GP reporting hearing loss. He reports sudden-onset right hearing loss that has remained continuous for the past three weeks. He notes that the day prior to this he hit his head with some force. Additionally, he mentions he has been experiencing some dizzy episodes over the same time frame. He goes onto have a pure-tone audiogram that demonstrates significant sensorineural hearing loss on the right side.

What is the most likely diagnosis?

	Stroke
	Benign paroxysmal positional vertigo (BPPV)
	Meniere's disease
	Acoustic neuroma
	Subdural haemorrhage

Dashboard

Overall score: 0%

1 -

Question 131 of 280

□ □

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	Subdural haemorrhage

Dashboard

Overall score: **0%**

1 -

□ Question 132 of 280



A 70-year-old male is evaluated at the neurology outpatient department for an episode of left sided body weakness which lasted for around 30 minutes and resolved completely. He described the episode as an inability to move the left side of his body and an associated numbness and tingling sensation in the area involved. He remained conscious throughout and was able to communicate verbally with his family members during the episode.

He suffers from hypertension and has hypercholesterolaemia. He is also a smoker with a 40 pack year history and is known to be a heavy drinker.

He has also noted a tremor in both his hands which tends to improve after he has a drink. He also feels unsteady while walking and feels the need to grip something otherwise he may lose balance. His medication includes amlodipine 5mg daily and atorvastatin 20mg daily.

On examination, his blood pressure is 150/95mmHg and his pulse is 86bpm regular. A carotid bruit is audible over both sides of the neck. Neurological examination reveals impaired sensations in a glove and stocking distribution. The remaining clinical examination is normal.

Investigations reveal:

ECG: deep S waves in lead V1-V3 and tall R waves in V4-V6

CXR: Enlarged cardiac silhouette with flecks of calcification around the aorta

Carotid artery Doppler studies reveal 85% occlusion in the right external carotid. 50% occlusion in the right internal carotid. Left internal carotid is 80% occluded while there is a 60% occlusion in the left external carotid artery.

Which of the following is the most suitable treatment option in this patient?

	Left internal carotid endarterectomy
	Optimizing medical management
	Right external carotid endarterectomy
	Percutaneous stenting of the right internal carotid artery

Dashboard

Overall score: **0%**

1 -

□ Question 132 of 280



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	Right external carotid endarterectomy
	Percutaneous stenting of the right internal carotid artery

Dashboard

Overall score: **0%**

1 -

□ Question 133 of 280



A 63-year-old man presented with a three-week history of double vision and fatigue. Over this period he had noticed that when he swallowed liquids these often came back out of his nose. He reported a decreased exercise tolerance over the past six months due to fatigue and shortness of breath.

On examination he was thin. He had bilateral ptosis and diplopia on looking in multiple directions. His voice was soft and he appeared peripherally cyanosed. On auscultation his chest was clear and heart sounds were normal.

Observations:

- Heart rate: 90 beats per minute
- SaO₂: 92% on room air
- Respiratory rate: 22 breaths per minute
- Temperature: 37.1 degrees Celsius
- Blood pressure: 110/68 mmHg

Arterial blood gases breathing air:

PO ₂	7.80 kPa (11.3 12.6)
PCO ₂	9.52 kPa (4.7 6.0)
pH	7.31 (7.35 7.45)
bicarbonate	32.4 mmol/L (21 29)
base excess	10 mmol/L (+/- 2)

Which urgent investigation should be performed next?

	Chest X-ray
	Forced vital capacity
	Computed Tomography Pulmonary Angiogram

	Electrocardiogram
	Bedside echocardiogram

Dashboard

Overall score: **0%**

1 -

□ Question 133 of 280



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	Electrocardiogram
	Bedside echocardiogram

Dashboard

Overall score: **0%**
1 -

Question 134 of 280

□ □

A 59-year-old woman is referred by her GP to neurology clinic for assessment. The patient describes intermittent episodes of pain affecting the left side of her face. She recalls the first attack vividly as a sudden onset of severe 'electric-shock' pain coming on suddenly around one year previously as she had cleaned her teeth with her electric toothbrush. The pain was felt around the cheek extending down to the jaw-line. The first attack had lasted several hours and she had ultimately attended her dentist and received a filling to a left molar tooth. While symptoms from that episode had resolved, she had then suffered from similar episodes at increasing frequency, approximately every fortnight over the last couple of months. These attacks had on occasion been unprovoked but were sometimes induced by stimulation of the affected area or cold winds. The patient was tearful as she recounted the negative impact her symptoms had had on her lifestyle. There was no history of headaches, sinus symptoms or seizures.

The patient had a fairly unremarkable past-medical history, notable only for hypothyroidism and long-standing struggles to avoid overweight. Her only regular medication was thyroxine 125 micrograms daily and the patient reported no allergies. There was no family history of neurological disease. The patient worked as a law clerk and did not smoke or drink significant alcohol.

Examination demonstrated an unremarkable cranial nerve and peripheral nerve examinations. In particular, colour vision, visual acuity and hearing were normal.

What is the correct first line management of the patient's symptoms?

	Gabapentin
	Carbamazepine
	Pregabalin
	Baclofen
	Lamotrigine

Overall score: **0%**

1 -

Question 134 of 280

□ □

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	Lamotrigine

Overall score: **0%**

1 -

Question 135 of 280

□ □

An 84-year-old male presents as a blue light ambulance call with a twelve hour history of sudden onset inability to move his right side. On examination, you note an expressive and receptive dysphasia associated with a dense right sensori-motor syndrome. Cardiovascular examination was unremarkable except for an irregular heartbeat at 80 per minute. A hyperacute CT head demonstrated a large area of ischaemia in the left middle cerebral artery vascular territory. The patient was outside the window for thrombolysis and started on 300mg aspirin. Subsequent echocardiogram demonstrated 60% ejection fraction with no mural thrombus, 40% left and 35% right stenosis on carotid Doppler while a 24hr tape demonstrated new atrial fibrillation. How can the risk of subsequent strokes be reduced?

	Subcutaneous low molecular heparin at 48 hours after stroke
	Warfarinisation at 48 hours after stroke
	Warfarinisation at 14 days after stroke
	Referral to vascular surgery for left carotid endarectomy
	Insertion of permanent pacemaker

Dashboard

Overall score: 0%

1 -

□ Question 135 of 280

□ □

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	Subcutaneous low molecular heparin at 48 hours after stroke
	Warfarinisation at 48 hours after stroke
	Warfarinisation at 14 days after stroke
	Referral to vascular surgery for left carotid endarectomy
	Insertion of permanent pacemaker

Dashboard

Overall score: **0%****1** -

□ Question 136 of 280



As the medical registrar on-call you are fast-bleeped to see a patient in the resuscitation room of the Emergency Department.

A 27 year-old lady presented with severe breathing difficulties and hypoxia, and had become increasingly drowsy whilst in the department. Arterial blood gases performed by the emergency physicians showed:

pH	7.142
pCO ₂	12.5 kPa
pO ₂	9.19 kPa
HCO ₃	25.3 mmol/l

Due to the rapidity of her decline, the emergency physicians tell you that only a very brief history was possible before she required intubation. She described a productive cough over the last few days, and mentioned that she was taking tablets for a neurological condition.

On examination, she is intubated and maintained on sedation with propofol. You notice a well-healed midline sternotomy scar. On auscultation of the chest there are coarse crackles audible in the left mid and lower zones.

She is transferred to the Intensive Care Unit for continued mechanical ventilation and is commenced on empirical broad-spectrum antibiotics.

Which one of the following additional interventions will most hasten her recovery?

	Botulinum anti-toxin
	Edrophonium
	Plasma exchange
	3,4-diaminopyridine

Dashboard

Overall score: **0%**

1 -

□ Question 136 of 280



As the medical registrar on-call you are fast-bleeped to see a patient in the resuscitation room of the Emergency Department.

A 27 year-old lady presented with severe breathing difficulties and hypoxia, and had become increasingly drowsy whilst in the department. Arterial blood gases performed by the emergency physicians showed:

pH	7.142
pCO ₂	12.5 kPa
pO ₂	9.19 kPa
HCO ₃	25.3 mmol/l

Due to the rapidity of her decline, the emergency physicians tell you that only a very brief history was possible before she required intubation. She described a productive cough over the last few days, and mentioned that she was taking tablets for a neurological condition.

On examination, she is intubated and maintained on sedation with propofol. You notice a well-healed midline sternotomy scar. On auscultation of the chest there are coarse crackles audible in the left mid and lower zones.

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	Edrophonium
	Plasma exchange
	3,4-diaminopyridine

Dashboard

Overall score: **0%**

1 -

Question 137 of 280

□ □

An 80-year-old lady is seen in the Emergency Department following a fall at home. She states she tripped over a rug whilst carrying her tea into the living room. She did not hit her head or lose consciousness. She fell onto her right hip and was unable to get up due to pain. She was found by her daughter two hours later.

She has a past history of high blood pressure (for which she takes amlodipine and ramipril) and osteoarthritis. She lives alone and is independent aside from her daughter bringing her shopping. She walks with a stick out of doors.

On examination she is alert and oriented. She has a large bruise over her right hip and a small skin tear on her right arm. Her heart rate is 96 beats per minute and her blood pressure is 110/56 mmHg. Systems examination is normal.

X-rays of her hips and pelvis show osteoarthritic change but no fractures.

She is unable to mobilise with the physiotherapist in the emergency department and is admitted to the ward overnight.

In the early hours of the following morning, she becomes confused and agitated. She is shouting that burglars are trying to steal her belongings. She is not oriented in place or time.

Which tool should be used to assess this lady's mental state?

	4AT
	Abbreviated Mental Test Score (AMTS)
	Confusion Assessment Method (CAM)
	Mini Mental State Examination (MMSE)
	Montreal Cognitive Assessment (MoCA)

Overall score: **0%**

1 -

Question 137 of 280

□ □

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Overall score: **0%**

1 -

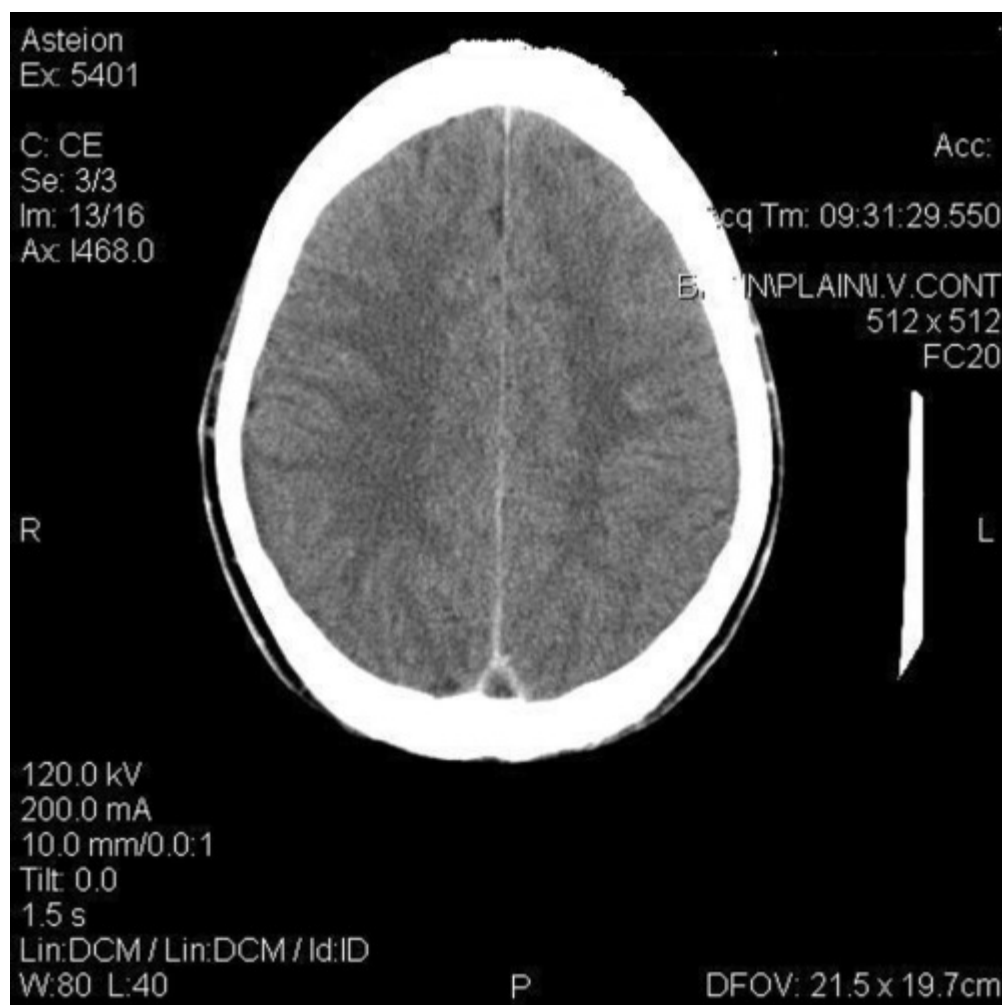
□ Question 138 of 280

□ □

A 19-year-old female is admitted to the Emergency Department after suffering a seizure. Her friends report that she is normally fit and well but had been complaining of a bad headache for the past few hours.

On examination her GCS is 13/15 (M6 V4 E3). No focal neurological deficit is noted. She appears slightly confused and is holding her head in her hands. Her pulse rate is 90/min with a temperature of 37.2°. No neck stiffness is noted.

A CT scan with contrast is requested:



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What is the most likely diagnosis?

<input type="radio"/>	Extradural haemorrhage
<input type="radio"/>	Superior sagittal sinus thrombosis
<input type="radio"/>	Herpes simplex encephalitis
<input type="radio"/>	Subarachnoid haemorrhage
<input type="radio"/>	Meningioma

Dashboard

Overall score: 0%

1 -

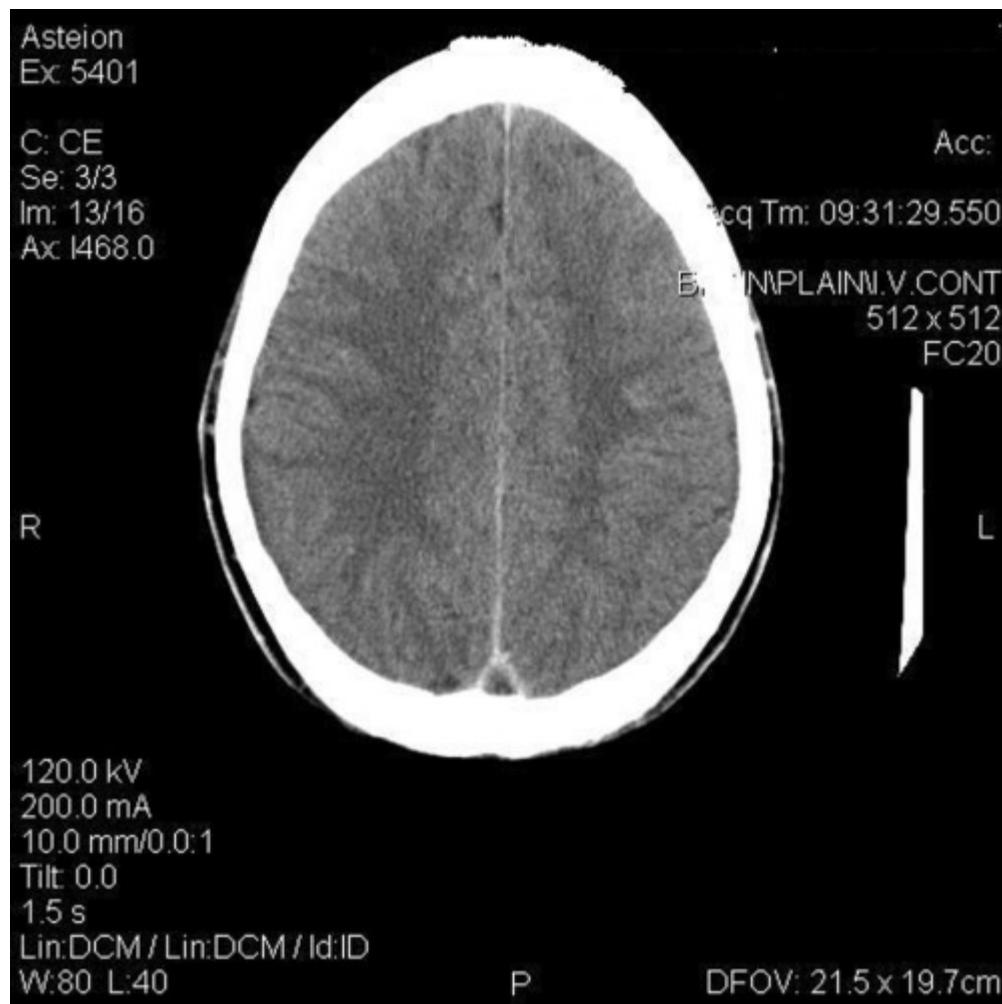
□ Question 138 of 280

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© Image used on license from Radiopaedia

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Dashboard

Overall score: 0%

1 -

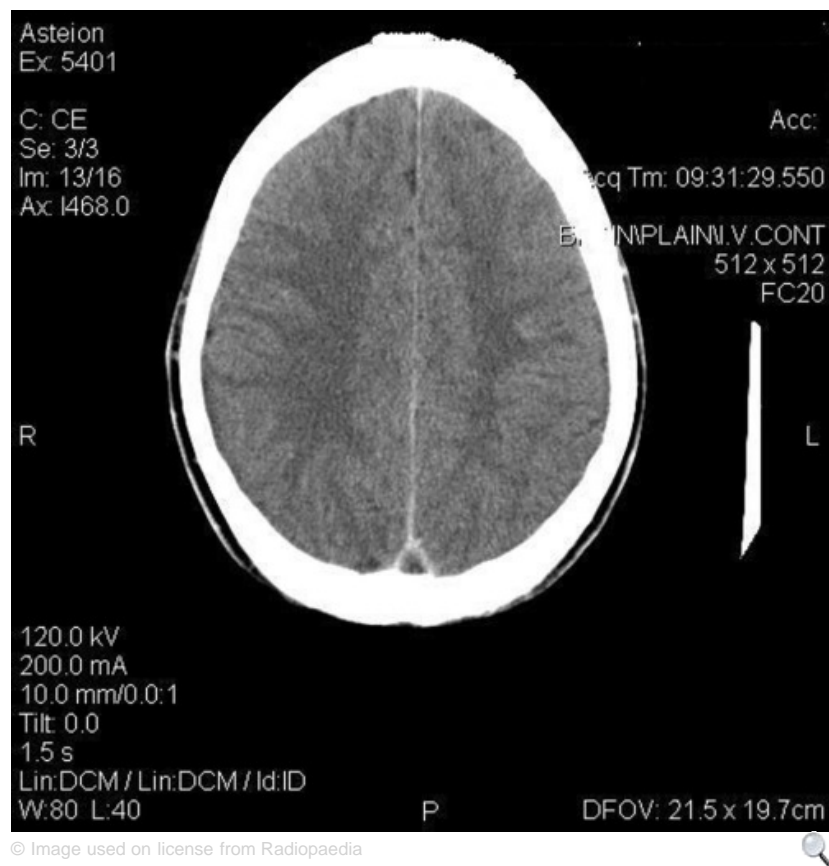
Question 138 of 280



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Dashboard

Overall score: 0%

1 -

Asteion
Ex: 5401

C: CE
Se: 3/3
Im: 13/16
Ax: 1468.0

Acc:

Acq Tm: 09:31:29.550

BrainPLAIN.V.CONT
512x512
FC20

R

L

120.0 kV
200.0 mA
10.0 mm/0.0:1
Tilt: 0.0
1.5 s
Lin:DCM / Lin:DCM / Id:ID
W:80 L:40

P

DFOV: 21.5 x 19.7cm



□ Question 139 of 280



A 47 year old female with relapsing-remitting multiple sclerosis (MS) describes increasing difficulty with fatigue, and has had to give up her work as a medical secretary. She has always been careful about ensuring a balanced diet, gentle exercise and early treatment of infection. On review and questioning her mood is good. Her most recent bloods are shown below:

Hb	120g/dl
Platelets	$150 \times 10^9/l$
WBC	$5.2 \times 10^9/l$

Na	130 mmol/l
K	3.8 mmol/l
Urea	6.0 mmol/l
Creatinine	68 μ mol/l

B12, folate and TFTs are normal.

What is the best course of action?

	Advise that she increase caffeine intake
	Advise that increasing exercise may benefit
	Trial of vitamin D
	Trial of amantadine
	Trial of ropinirole

Dashboard

Overall score: **0%**

1 -

□ Question 139 of 280



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	Advise that increasing exercise may benefit
	Trial of vitamin D
	Trial of amantadine
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Dashboard

Overall score: **0%**

1 -

Question 140 of 280

□ □

A 21-year-old Caucasian female presents to eye casualty with an episode of sudden onset blurred vision in her left eye. She reports noticing it about 10 days ago and reports progressive deterioration associated with pain on eye movement until her presentation today. There is a vague history of a possible 'cough and cold' about 3 weeks ago but she has reported no other recent illnesses. She has no past medical history, is on the oral contraceptive pill and has no other medications. There is no smoking, alcohol or recreational drug history.

On examination, you note visual acuity and colour vision on Ishihara plates to be 6/6 and 17/17 plates in her right eye, 6/24 and 0/17 plates in her left eye. A left relative afferent papillary defect was demonstrated, fundoscopy was unremarkable. Examination of her other cranial nerves and limbs were unremarkable. Her blood tests were unremarkable and she has declined a lumbar puncture. An MRI head and whole spine demonstrates no abnormalities except for a swollen left optic nerve is visualised. What is the most appropriate treatment?

	No treatment, reassure patient vision will resolve
	Oral prednisolone
	Intravenous methylprednisolone
	Intravenous immunoglobulin
	Interferon beta

Dashboard

Overall score: 0%

1 -

Question 140 of 280

□ □

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	Intravenous methylprednisolone
	Intravenous immunoglobulin
	Interferon beta

Dashboard

Overall score: **0%**

1 -

Question 141 of 280

□ □

A 57-year-old man presents with slurred speech. He was brought in by ambulance as his daughter was concerned when she came to visit and found his speech to be abnormal. On questioning, the patient has not noticed any changes; but the daughter has noticed that he has been drooling and been having difficulty eating for several months. She has not noticed a change in his memory or cognitive function but has been concerned that he has been laughing out of place in conversations. On examination, the patient has slight slurred speech, mild dysarthria and the tongue appears to move abnormally. His limbs are normal on examination, as is the remainder of his cranial nerve examination. What is the most likely diagnosis?

	Myotonic dystrophy
	Stroke
	Motor neuron disease
	Multiple sclerosis
	Syringobulbia

Dashboard

Overall score: 0%

1 -

Question 141 of 280

□ □

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	Myotonic dystrophy
	Stroke
	Motor neuron disease
	Multiple sclerosis
	Syringobulbia

Dashboard

Overall score: **0%**

1 -

□ Question 142 of 280



A 25-year-old woman presents to the neurology outpatient clinic with a month history of worsening headache.

The headache is mostly frontal in nature but does move to the back of her head sometimes. It never goes away but is worst in the morning. It is throbbing in nature. In the last week it has begun to make her feel sick, although she has not vomited. She has also developed a thudding sound in her ears which she first noticed when trying to go to sleep at night but now sometimes hears at other times. She has no change in her vision or photophobia.

She has no past medical history of note and has no allergies. Her only current medication is the oral contraceptive pill. She is obese, drinks no alcohol and smokes ten cigarettes per day.

On examination her heart rate is 90/min and her blood pressure is 165/94 mmHg. Her pupils are equal and reactive and her visual fields are full to confrontation. Vision is 6/6 in both eyes and extra-ocular movements are normal. Fundoscopy reveals slight blurring of the optic disc margins with a normal retina.

Examination of the other cranial nerves reveals no deficits. On examination of the upper and lower limbs, tone, power, coordination and reflexes are all normal, with downgoing planters. Her BMI is 31.

Blood tests:

Hb	150 g/l
Platelets	$250 \times 10^9/l$
WBC	$7 \times 10^9/l$

Na ⁺	136 mmol/l
K ⁺	4 mmol/l
Urea	6 mmol/l
Creatinine	72 μ mol/l

What is the next most appropriate imaging investigation?

	CT angiogram head
	CT head without contrast
	MR angiogram head
	MRI head without contrast
	MR venogram head

Dashboard

Overall score: **0%**

1 -

□ Question 142 of 280



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	CT angiogram head
	CT head without contrast
	MR angiogram head
	MRI head without contrast
	MR venogram head

Dashboard

Overall score: **0%**
1 -

□ Question 143 of 280

□ □

A 64 year old man is referred to you from a psychiatrist for a second opinion. He initially presented with a 3 month history of low mood, apathy and suicidal ideation. In addition he was asked to retire early from his job as an accountant as he was performing poorly at work. He is also sleeping an average of 14 hours per day.

When the psychiatrist assessed him he noted abnormal jerky movements in the lower limbs as well as a broad based gait. An MMSE was performed and he scored 15/30. This is corroborated by your examination and you also note hyperreflexia in the lower limbs and nystagmus.

He has no history of cognitive impairment or any psychiatric history. There is no family history of any neurological or psychiatric conditions and his only past medical history is an appendectomy 20 years ago which was complicated by a large intraperitoneal bleed.

Which findings are you most likely to find on investigation?

	Increased T2 and FLAIR signal intensity in the putamen and head of the caudate on T2 weighted MRI, 14-3-3 protein on CSF
	CAG trinucleotide repeats on the short arm of chromosome 4
	Increased T2 and FLAIR signal intensity in the putamen and head of caudate on T2 weighted MRI and oligoclonal bands on CSF
	CAG trinucleotide repeats on the short arm of chromosome 12
	Cortical atrophy, most prominent in the frontal lobes

Dashboard

Overall score: 0%

1 -

Question 143 of 280

□ □

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	CAG trinucleotide repeats on the short arm of chromosome 12
	Cortical atrophy, most prominent in the frontal lobes

Dashboard

Overall score: **0%**

1 -

Question 144 of 280

□ □

A 45 year old previously fit and well man presents to the emergency department with worsening leg weakness. He is in full time employment as a brick layer and is normally very active. Over the last 24 hours he has started dragging his feet and feels unsteady when walking, describing his gait 'like a drunk man'. On questioning he also describes increasing difficulty passing urine and has not had the sensation to empty his bladder for the past eight hours. He denies any preceding trauma, recent viral illness or similar previous symptoms in the past.

On examination he has normal muscle bulk and no fasciculations. There is symmetrical lower limb flaccid paralysis to the hips, with symmetrical hyporeflexia. He has a sensory level to T10 and is in urinary retention. Examination of the upper limbs and cranial nerves is entirely normal.

Which of the following would be the most useful initial investigation?

	Aquaporin 4 antibodies
	Lumbar puncture
	MRI spinal cord
	MRI brain
	HIV serology

Dashboard

Overall score: 0%

1 -

Question 144 of 280

□ □

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	HIV serology

Dashboard

Overall score: **0%**

1 -

□ Question 145 of 280

□ □

A 55-year-old woman attends neurology clinic for follow-up. At her first appointment 6 months previously, a clinical diagnosis of trigeminal neuralgia had been made and treatment with carbamazepine initiated. During clinic review the patient complained of ongoing symptoms with only limited benefit from drug treatment.

On her previous assessment, the patient had reported pain episodes associated with the cheek and jaw of the right side of her face. Subsequently, in addition to similar ongoing episodes, the patient had suffered from two episodes of pain affecting the forehead and peri-orbital region on the left side of her face. On one occasion, she had suffered from both right and left sided pain at the same time. She reported that the carbamazepine treatment had initially reduced the intensity of the pain episodes by perhaps 50 %, but that the severity of recent attacks had again worsened to their original level. When her drug history was checked, it was apparent that the carbamazepine dose had been titrated up appropriately by the patients GP.

The patient also stated that following her previous clinic appointment she had been discussing the situation with her sister, who had reminded the patient that their mother had suffered several episodes of visual loss during her life but had not undergone any medical investigation.

Cranial nerve examination demonstrated normal eye movements and pupillary responses. There was no evidence of facial nerve weakness, however a subjective numbness of sensation was noted in the left cheek region (this had not been noted on previous examination in clinic). There were no lesions around the head and neck or inside the mouth. Peripheral neurological examination was remarkable for borderline dysdiadochokinesia in the right upper limb and a positive Babinski response in the right lower limb.

What is the most appropriate investigation for this patient?

	Visual evoked potentials
	Three-plane fine-slice MRI brain with contrast
	CSF oligoclonal bands
	CT brain with contrast
	Standard protocol MRI brain with contrast

Dashboard

Overall score: **0%**

1 -

□ Question 145 of 280



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Dashboard

Overall score: **0%**

1 -

□ Question 146 of 280



A 24 year-old university student presents with a 10 day history of visual disturbance. He reports changes in his visual acuity where he has been experienced some blurring of his vision which is considerably worse after having been for a run. He thinks it is related to some pain he developed on his right eye prior to the onset of his vision loss. He has no previous history of visual problems and is normally fit and well. He takes no regular medications.

On further questioning he reports that 6 months ago he had some sensory changes on his lower limbs. He felt they were numb and this persisted for a few weeks. He thought it was due to his sporting activities, as he is an avid hockey player.

He drinks 20 units of alcohol at the weekends and does not smoke.

His blood results are shown below:

Hb	134 g/l
Platelets	250 * 10 ⁹ /l
WBC	8 * 10 ⁹ /l
Na ⁺	134 mmol/l
K ⁺	4.1 mmol/l
Urea	4 mmol/l
Creatinine	60 µmol/l

Which investigation below would be most useful to diagnose this patient?

	EEG
	CT head
	HIV serology
	Contrast MRI brain and spine

	Anti-NMO antibodies
--	---------------------

Dashboard

Overall score: **0%**

1 -

Question 146 of 280



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Dashboard

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Question 146 of 280

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Dashboard

Overall score: **0%**

1 -



Question 146 of 280

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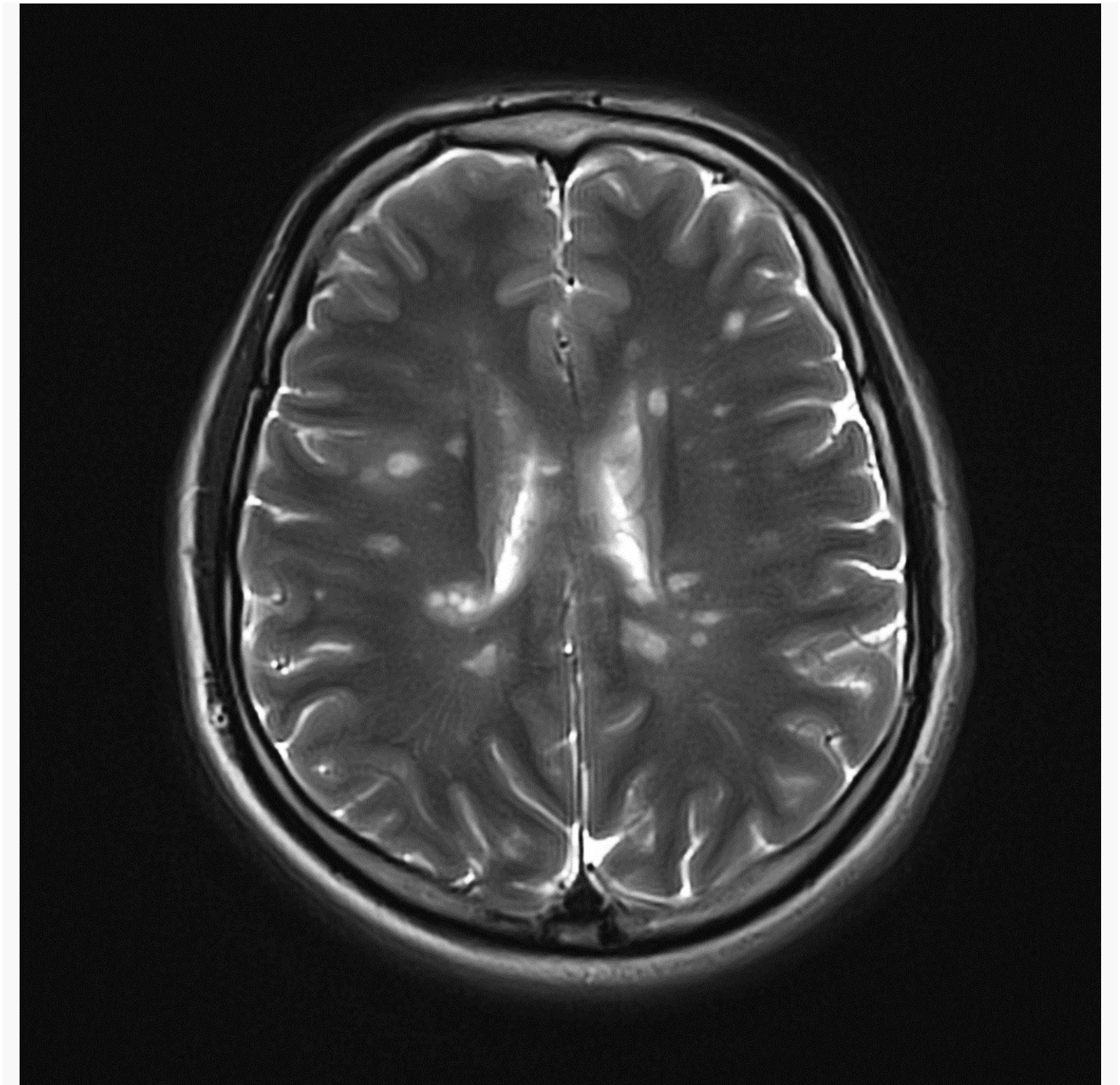
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Question 146 of 280

□ □

A 24 year-old university student presents with a 10 day history of visual disturbance. He reports changes in his visual acuity where he has been experienced some blurring of his vision which is considerably worse after having been for a run. He thinks it is related to some pain he developed on his right eye prior to the onset of his vision loss. He has no previous history of visual problems and is normally fit and well. He takes no regular medications.

On further questioning he reports that 6 months ago he had some sensory changes on his lower limbs. He felt they were numb and this persisted for a few weeks. He thought it was due to his sporting activities, as he is an avid hockey player.

He drinks 20 units of alcohol at the weekends and does not smoke.

His blood results are shown below:

Hb	134 g/l
Platelets	$250 \times 10^9/l$
WBC	$8 \times 10^9/l$
Na ⁺	134 mmol/l
K ⁺	4.1 mmol/l
Urea	4 mmol/l
Creatinine	60 μ mol/l

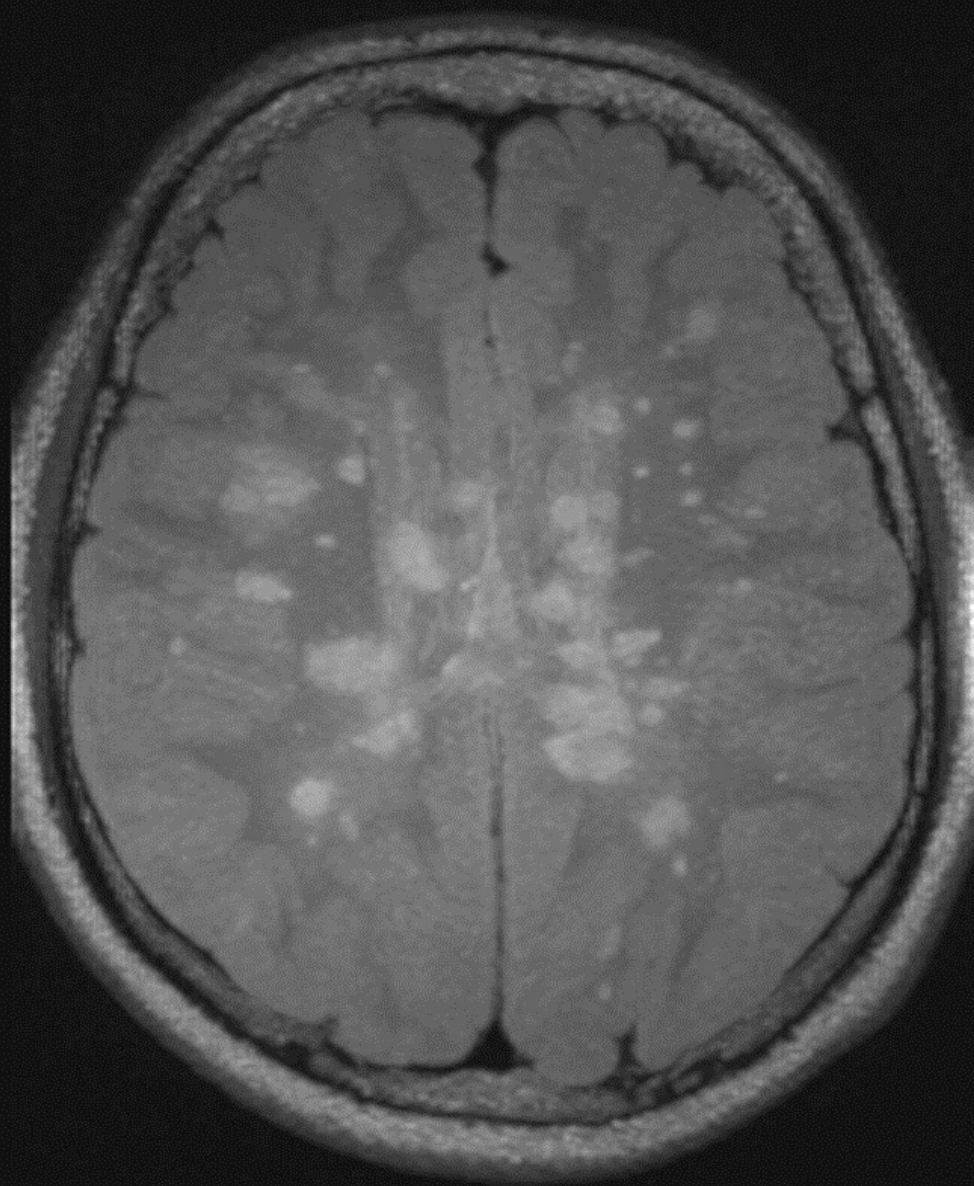
Which investigation below would be most useful to diagnose this patient?

EEG
CT head
HIV serology
Contrast MRI brain and spine

Dashboard

Overall score: **0%**

1 -



□ Question 147 of 280



A 72 year old male from Dominican Republic presents with a 4 month history of constant bilateral anterior thigh pain and lower limb weakness, starting first in the left before progressing to bilateral symptoms. He reports being an extremely active man prior to these symptoms, continually to work as a landscape gardener until four months ago, and now he is wheelchair and bed-bound. He denies any history of trauma to his hips, previous tuberculosis infection or contact with heavy metals. His thigh pain appears excruciating, described as burning in nature along the anterior aspects of both thighs to the origin of the patella tendon bilaterally. He reports no recent weight loss, pyrexia or skin changes. His past medical history includes hypertension, hypercholesterolaemia, hypothyroidism and type 2 diabetes mellitus (diagnosed 6 years ago).

On examination, the patient has mildly reduced muscle bulk in bilateral hip flexors and bilateral fasciculations in both thighs. Examination of power demonstrates 2+/5 bilaterally in hip flexion 4+/5 hip extension bilaterally and 5/5 all other lower limb movements. Sensory examination revealed reduced sensation to cotton wool in both thighs and distal feet, reduced proprioception in both toes. Reflexes were 2+ at both knee jerks, absent ankle jerks bilaterally and downgoing plantars bilaterally. His blood tests are as follows:

Hb	13.4 g/dl
Platelets	383 * 10 ⁹ /l
WBC	4.5 * 10 ⁹ /l

Na ⁺	135 mmol/l
K ⁺	4.6 mmol/l
Urea	8.6 mmol/l
Creatinine	112 µmol/l
CRP	1 mg/l
Creatine kinase	116 IU/l (50-335)
HbA1c	68 mmol/mol
TSH	2.1 mu/l

Free T4	15.4 nmol/l
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A MRI scan was performed of his lumbosacral plexus, demonstrating no appreciable structural lesion. Nerve conduction studies and EMG are awaited.

What is the optimal treatment?

	Optimise diabetic control
	Riluzole
	Intravenous immunoglobulin
	Intravenous methylprednisolone
	Lumbar puncture

Dashboard
Overall score: 0% 1 -

□ Question 147 of 280



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	Optimise diabetic control
	Riluzole
	Intravenous immunoglobulin
	Intravenous methylprednisolone
	Lumbar puncture

Dashboard
<p>Overall score: 0%</p> <p>1 -</p>

Question 148 of 280

□ □

You have been referred a 45-year-old man by the Accident and Emergency doctors with a severe headache. The headache woke him up at 3am, and he describes it as the worst headache he's ever had, (although he admits he's not a regular headache sufferer). He has had seven episodes like this over the past two weeks that have followed a very similar pattern, with the other two headaches lasting around 60 minutes before going. The pain is mainly around the left eye and temple and is sharp in nature. You have to ask him to sit down to examine him because he is up and pacing around his room, clearly very agitated. On examining him you note that his left eye is watering and swollen, and there's some redness and mild bruising just above the eye. When you ask him about this bruising he says that the pain was so bad he bashed his head against the fridge door to try and help take it away.

On examination he has normal power, sensation and reflexes in all four limbs.

On examining his cranial nerves you notice that he has a mild left sided ptosis and miosis, and there is conjunctival injection and lacrimation on that side too.

His neck movements are slow but complete, and he has no obvious stiffness or photophobia

What is the most likely cause of his headache?

	Cluster headache
	Subarachnoid haemorrhage
	Paroxysmal hemicrania
	Migraine
	Tension headache

Dashboard

Overall score: 0%

Question 148 of 280

You have been referred a 45-year-old man by the Accident and Emergency doctors with a severe headache. The headache woke him up at 3am, and he describes it as the worst headache he's ever had, (although he admits he's not a regular headache sufferer). He has had seven episodes like this over the past two weeks that have followed a very similar pattern, with the other two headaches lasting around 60 minutes before going. The pain is mainly around the left eye and temple and is sharp in nature. You have to ask him to sit down to examine him because he is up and pacing around his room, clearly very agitated. On examining him you note that his left eye is watering and swollen, and there's some redness and mild bruising just above the eye. When you ask him about this bruising he says that the pain was so bad he bashed his head against the fridge door to try and help take it away.

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<input checked="" type="checkbox"/>	Cluster headache
<input type="checkbox"/>	Subarachnoid haemorrhage
<input type="checkbox"/>	Paroxysmal hemicrania
<input type="checkbox"/>	Migraine
<input type="checkbox"/>	Tension headache

Dashboard

Overall score: **0%**

Question 149 of 280

□ □

A 76 year old residential home resident was seen in the neurology clinic. She had a history of Alzheimer's disease, and her behaviour had become progressively more challenging over the past 4 months, for which she had been started on regular haloperidol.

The residential home staff had reported that over the previous four weeks she had developed involuntary movements of her mouth, with frequent tongue protrusion and lip-smacking. There were no neurological deficits, and no history of blackouts. Two weeks ago she was reviewed by the general practitioner who stopped her haloperidol. However, her involuntary facial movements became more prominent following this.

On examination she appeared well, other than continuous involuntary lip-smacking, tongue protrusion, and frequent eye-blinking. She was alert, and there were no focal neurological deficits.

What is the most likely cause for her symptoms?

	Temporal lobe epilepsy
	Progression of Alzheimer's disease
	Chronic tardive dyskinesia
	Frontotemporal dementia
	Huntington's disease

Dashboard

Overall score: 0%

1 -

Question 149 of 280

□ □

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	Temporal lobe epilepsy
	Progression of Alzheimer's disease
	Chronic tardive dyskinesia
	Frontotemporal dementia
	Huntington's disease

Dashboard

Overall score: **0%**

1 -

Question 150 of 280

A 76 year old male is referred by the GP to your Parkinsons disease clinic. The patient and his wife described an increasing frequency of falls, the most frightening of which occurred when he fell 4 steps down a flight of stairs last week, luckily with no lasting damage. On examination, you note a slow pill rolling tremor equally on both hands and bilateral cog-wheeling. His cranial nerves are unremarkable except a poverty of upwards gaze. His speech appears distinct and nasal in character. What is the diagnosis?

<input type="checkbox"/>	Idiopathic Parkinsons disease
<input type="checkbox"/>	Vascular Parkinsonism
<input type="checkbox"/>	Progressive supranuclear palsy (PSP)
<input type="checkbox"/>	Multi-system atrophy (MSA)
<input type="checkbox"/>	Corticobasal degeneration (CBD)

Dashboard

Overall score: **0%**

1 -

Question 150 of 280

□ □

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	Vascular Parkinsonism
	Progressive supranuclear palsy (PSP)
	Multi-system atrophy (MSA)
	Corticobasal degeneration (CBD)

Dashboard

Overall score: **0%**

1 -

□ Question 151 of 280



A 28-year-old woman presents with a gradually worsening headache, nausea and vomiting.

The headache started about 3 days ago coming on over about 3-4 hours and is worse on coughing and lying flat. She has been complaining of some nausea and vomiting which she had attributed to some reheated curry she had the night before.

She is usually fit and well but did suffer a spontaneous below-knee deep vein thrombosis (DVT) 3 years ago which was treated with warfarin for 6 months. She has been taking over-the-counter paracetamol and ibuprofen for the headache and currently has a Mirena intrauterine coil in-situ for contraception. She has no known drug allergies.

She currently works as a sales associate. She smokes 10 cigarettes a day and drink 21 units of alcohol a week.

On examination she looks unwell, pale and nauseated. Her blood pressure was 140/98 mmHg, heart rate 100 bpm, oxygen saturations of 98% on air. Her temperature was 36.1 degrees Celsius.

Heart sounds were normal, and her calves soft and non-tender with no evidence of thromboembolism.

Her chest was clear and her abdominal examination was unremarkable.

On neurological examination there was no cranial nerve abnormalities noted. She had normal tone, power, reflexes and sensation in both her upper and lower limbs. Coordination was intact.

Bloods taken by the Emergency Department were as follows:

Na+	136 mmol/L
K+	3.9 mmol/L
Urea	4.8 mmol/L
Creatinine	76 µmol/L
Hb	12.5 g/dL
WBC	11.0 x 10 ⁹ /L

Platelets	350 x 10 ⁹ /L
INR	0.9
aPTT	30 seconds
LFTs	Normal

CT head was performed and reported as normal.

Following this a lumbar puncture was performed:

CSF colour	Clear
Opening pressure	250 mmH ₂ O
White cell count	5.0 x 10 ⁶ /L (all lymphocytes)
Red cell count	15 x 10 ⁶ /L
Protein	0.3 g/L
Glucose	4.4mmol/L (Serum glucose 5.3mmol/L)

What is the most likely diagnosis?

<input type="checkbox"/>	Intracranial venous thrombosis
<input type="checkbox"/>	Subarachnoid haemorrhage
<input type="checkbox"/>	Migraine
<input type="checkbox"/>	Intracerebral malignancy
<input type="checkbox"/>	Subdural empyema

Dashboard

Overall score: **0%**

1 -

□ Question 151 of 280



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What is the most likely diagnosis?

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	Subarachnoid haemorrhage
	Migraine
	Intracerebral malignancy
	Subdural empyema

Dashboard
Overall score: 0% 1 -

Question 152 of 280

□ □

A 58 year old man presents to Accident and Emergency with his wife complaining of memory loss. His first noticed a problem when he had difficulty making breakfast in the morning. When you question him, he has no memory of the events of today and patchy memory of the events of the past week although his wife informs you that he had no problem with his memory yesterday. He appears extremely anxious about his memory loss and repeatedly asks you 'Have I got dementia?'. He is able to remember his name and date of birth and recognise and name his wife. However, when using the toilet, he becomes lost and is unable to find his way back to the cubicle.

On examination his HS 1 + 2 + 0, he has corneal arcus, chest is clear. There is reduced power 4/5 to all arm movements in the right arm with normal reflexes, tone and sensation. His wife tells you that this has been present for several years following a stroke. There is no facial droop, there is no dysarthric speech or any other peripheral focal neurology and there are no cerebellar signs. Gait is normal.

He is able to count back from 20-1 and can name objects you present to him without difficulty. However he scores 0/3 on the delayed recall section of the MMSE. He is alert and fully responsive throughout the consultation.

Past medical history is of previous left sided middle cerebral territory infarct and one previous TIA one year ago. Hypercholesterolemia, hypertension. He has a 20 pack year history of smoking and used to drink 4-6 units of alcohol per day for 20 years but stopped this 25 years ago and his wife corroborates this information. His medications include Clopidogrel, Atorvastatin, Ramipril and Bendroflumethiazide.

CT Brain was performed 3 hours after waking up and is consistent with an old left sided infarct. No other abnormality detected.

What is the most appropriate treatment for this diagnosis?

	Intravenous thiamine and Vitamin B
	Oral thiamine and vitamin B
	Thrombolysis
	Donepezil

Dashboard

Overall score: **0%**

1 -

□ Question 152 of 280

□ □

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Dashboard

Overall score: **0%**

1 -

Question 153 of 280

□ □

A 55-year-old male is found confused on street by a policeman. Hospital records document that he is a known to be a type 2 diabetic with previously DNAs to clinic and known poor compliance with medications. He also had two previous admissions to hospital, 2 and 10 years ago, for alcohol withdrawal. On examination, the patient is not orientated in time or place, scoring 0 out of 10 on abbreviated mental. He is able to follow your commands in lifting his upper and lower limbs during his neurological exams. All reflexes were present. He fails to follow your finger with his eyes on cranial nerve examination. His gait is grossly ataxic, as you noted when he tried to walk to the toilet against medical and nursing advice. His blood sugar is awaited. What is the diagnosis?

	Wernicke's encephalopathy
	Delirium
	Miller-Fisher syndrome
	Hypoglycaemia secondary to anti-glycaemic overdose
	Acute ischaemic stroke

Dashboard

Overall score: 0%

1 -

Question 153 of 280

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Dashboard

Overall score: 0%

1 -

Relationship between Wernicke's encephalopathy and Korsakoff's syndrome

Wernicke's encephalopathy

- nystagmus
- ophthalmoplegia
- ataxia

if untreated



Korsakoff's syndrome

- amnesia (antero + retrograde)
- confabulation

i.e. initially

↳ Wernicke's encephalopathy
if not treated with thiamine
↳ Wernicke-Korsakoff syndrome

Question 154 of 280

□ □

A 76-year-old gentleman with diabetes mellitus was referred to a specialist memory clinic by his family doctor. His wife was concerned as he had been more forgetful recently and had developed urinary incontinence. His family doctor had treated him with a course of trimethoprim for a urinary tract infection but his symptoms had persisted.

On examination this gentleman smelt strongly of urine. He had a broad-based, unsteady gait. Examination of his cardiovascular and respiratory systems was unremarkable but on abdominal examination there was suprapubic tenderness. He was orientated to place but scored only 22/30 on a Mini Mental State Examination (MMSE).

Urinalysis:

Blood -
Protein Trace
Nitrites -
White cells +
Microscopy 50 white cells seen, bacteria +
Cultures Mixed growth, please send repeat sample

Magnetic Resonance Imaging (MRI) of the brain: 'Disproportionately enlarged ventricular system compared with the degree of sulcal atrophy.'

Lumbar Puncture (LP):

Opening pressure	18 cmH ₂ O (12 20)
Appearance	Clear and colourless
Red cells	4
White cells	1 (0 5)
Gram stain	No organisms seen
Culture	No organisms seen
Protein	30 mg/100ml (15 60)

Glucose	98mg/100ml (50 80)
Virology	No viruses detected on PCR
Cytology	No abnormal cells seen
Timed 10 metre walk pre-LP	15 seconds
Timed 10 metre walk post-40 mL CSF drainage	12 seconds

Given the underlying diagnosis what is the definitive treatment of choice?

	Repeated therapeutic lumbar punctures
	Acetazolamide
	Referral for a ventriculo-peritoneal shunt
	Vitamin B12 and folate replacement
	Referral for lumbar drain insertion

Dashboard
Overall score: 0%
1 -

□ Question 154 of 280



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Timed 10 metre walk post-40 mL CSF drainage	12 seconds

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	Repeated therapeutic lumbar punctures
	Acetazolamide
	Referral for a ventriculo-peritoneal shunt
	Vitamin B12 and folate replacement
	Referral for lumbar drain insertion

Dashboard

Overall score: **0%**
1 -

□ Question 155 of 280



A 42 year-old man presents with an acute onset of weakness in the left face, arm, and leg, which has not resolved. On examination there is upper motor neuron facial weakness on the left, with dense weakness of the left arm and leg. There is no evidence of sensory neglect, hemianopia, or dysphasia.

He past medical history includes migraine with visual aura, for which he takes propranolol and sumatriptan. His last migraine attack was a month ago. He has suffered two transient ischaemic attacks in the last year, and now also takes clopidogrel. His father also suffered from migraine with aura and died in his 50s after suffering a series of strokes.

Plain computed tomography shows multiple round lesions in the white matter, which appear the same density as cerebrospinal fluid. Magnetic resonance imaging shows scattered well-circumscribed lesions in the subcortical white matter which appear hypointense on T1 and hyperintense on T2-weighted sequences. On DWI (diffusion-weighted imaging) there is a hyperintense lesion in the right internal capsule, with a corresponding hypointense area on the ADC (apparent diffusion coefficient) map.

What is the most likely underlying diagnosis?

	Patent foramen ovale
	Progressive multifocal leukoencephalopathy
	Migrainous infarction
	Cerebral amyloid angiopathy
	CADASIL

Dashboard

Overall score: **0%**

1 -

Question 155 of 280

□ □

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	Migrainous infarction
	Cerebral amyloid angiopathy
	CADASIL

Dashboard

Overall score: **0%**

1 -

Question 156 of 280

□ □

An 80-year-old male presents to the Parkinson's disease (PD) clinic complaining of jerking and flailing movements of his arm. He says he has no control of them and finds them embarrassing and disabling. However, he reports very few other PD symptoms, with minimal problems with 'off' periods. His past medical history includes PD, diagnosed 8 years ago, and type 2 diabetes. He currently takes Sinemet 250 for Parkinson's disease 5 times a day and metformin 500mg TDS, he has been on the same dose of Sinemet for past 18 months. What is your most appropriate management?

	Reduce dose of Sinemet
	Increase dose of Sinemet
	Start entacapone
	Start ropinirole
	Deep brain stimulation (DBS)

Dashboard

Overall score: 0%

1 -

Question 156 of 280

□ □

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Dashboard

Overall score: **0%**

1 -

□ Question 156 of 280

□ □

An 80-year-old male presents to the Parkinson's disease (PD) clinic complaining of jerking and flailing movements of his arm. He says he has no control of them and finds them embarrassing and disabling. However, he reports very few other PD symptoms, with minimal problems with 'off' periods. His past medical history includes PD, diagnosed 8 years ago, and type 2 diabetes. He currently takes Sinemet 250 for Parkinson's disease 5 times a day and metformin 500mg TDS, he has been on the same dose of Sinemet for past 18 months. What is your most appropriate management?

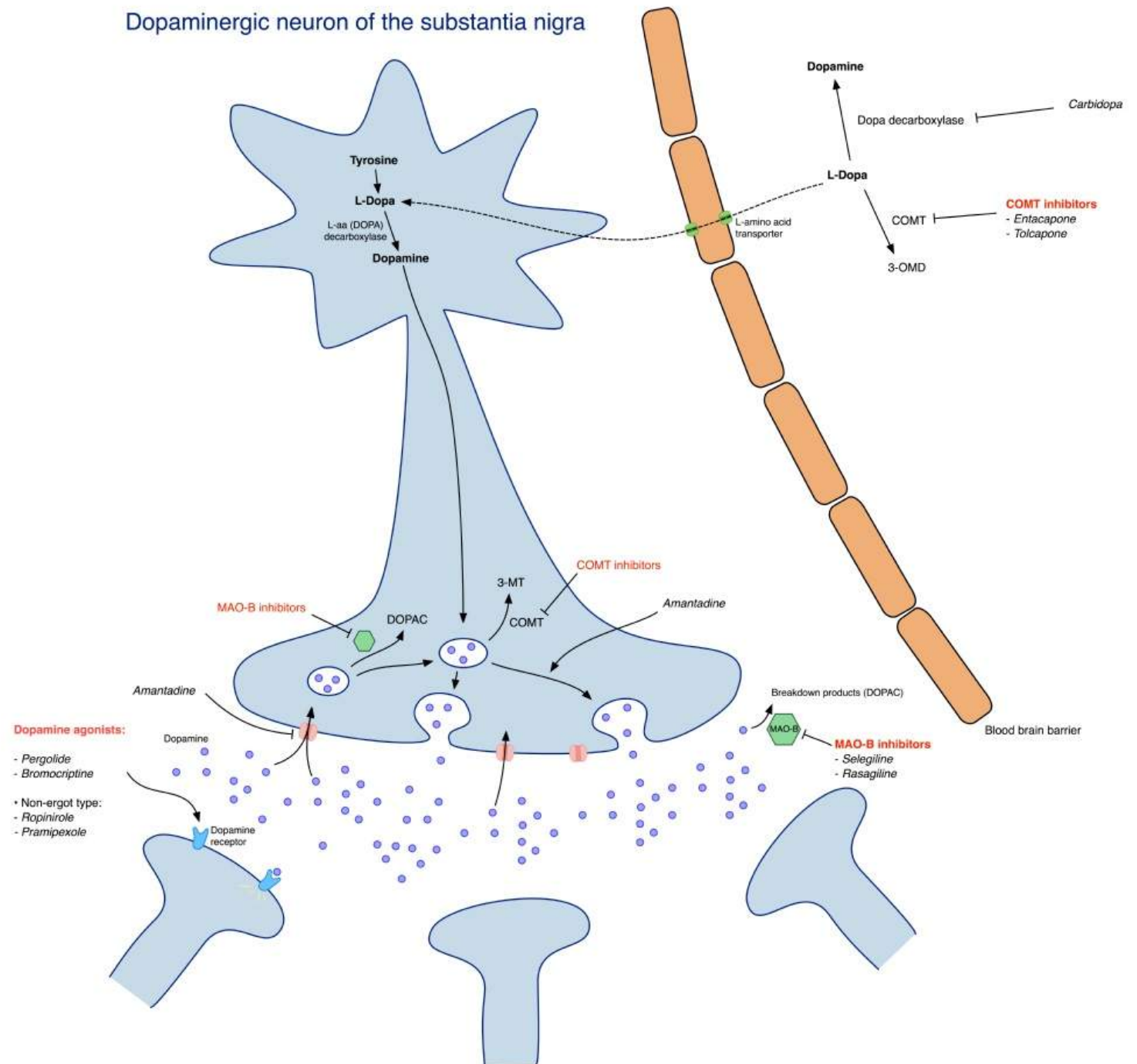
	Reduce dose of Sinemet
	Increase dose of Sinemet
	Start entacapone
	Start ropinirole
	Deep brain stimulation (DBS)

Dashboard

Overall score: 0%

1 -

Dopaminergic neuron of the substantia nigra



Question 157 of 280

□ □

A 46-year-old lady complains of proximal muscle weakness over 6 months. History is otherwise unremarkable. She has no past medical history and is on no medications. She does not drink alcohol. On examination, power is 4/5 proximally in both arms and legs, otherwise unremarkable. Blood investigations are normal except for an elevated creatinine kinase level at 900 U/L. Electromyography demonstrates myopathic features. You order a muscle biopsy to help differentiate which myopathy is present. The results show endomysial lymphocytic infiltrates that invade nonnecrotic muscle fibres. What is the most likely diagnosis?

	Dermatomyositis
	Inclusion body myositis
	Systemic lupus erythromatosis
	Lung cancer
	Polymyositis

Dashboard

Overall score: 0%

1 -

Question 157 of 280

□ □

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	Inclusion body myositis
	Systemic lupus erythromatosis
	Lung cancer
	Polymyositis

Dashboard

Overall score: **0%**

1 -

Question 158 of 280

□ □

A 32-year-old lady develops a progressive loss of central vision in both eyes over two days. Her eyes are also painful to move. 24 hours later she develops additional paraesthesia in both arms with an associated weakness of both arms. On examination, she has central scotoma of both eyes. She also has a 3/5 global weakness of both arms with hyperreflexia and patchy sensory loss. In the following days, this progresses to paraesthesia and weakness in both lower limbs plus extensor plantar responses. Raised serum levels of which of the following would be most helpful in establishing the suspected underlying diagnosis? helpful in establishing the suspected diagnosis?

	Anti-Hu antibodies
	Antinuclear antibodies
	N-methyl-d-aspartate (NMDA) receptor antibodies
	Anti-Aquaporin-4 antibodies
	Voltage gated potassium channel antibodies

Dashboard

Overall score: 0%

1 -

Question 158 of 280

□ □

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	N-methyl-d-aspartate (NMDA) receptor antibodies
	Anti-Aquaporin-4 antibodies
	Voltage gated potassium channel antibodies

Dashboard

Overall score: **0%**

1 -

Question 159 of 280

□ □

A 75 year old man with Parkinson's disease is brought to see you in clinic by his son. He has become increasingly concerned that his neighbours have been watching him, and have put wiring throughout his walls to monitor his movements. He has also been describing visual hallucinations of animals climbing up his walls. His son is concerned that he has become increasingly anxious. He is currently on co-careldopa, ropinirole, and rasagiline. What is the best course of action?

	Initiate a 'drug holiday' withholding all but co-careldopa for 1 week
	Reduce ropinirole
	Reduce rasagiline
	Refer for cognitive behavioural therapy
	Start quetiapine

Dashboard

Overall score: 0%

1 -

Question 159 of 280

□ □

A 75 year old man with Parkinson's disease is brought to see you in clinic by his son. He has become increasingly concerned that his neighbours have been watching him, and have put wiring throughout his walls to monitor his movements. He has also been describing visual hallucinations of animals climbing up his walls. His son is concerned that he has become increasingly anxious. He is currently on co-careldopa, ropinirole, and rasagiline. What is the best course of action?

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Dashboard

Overall score: **0%**

1 -

□ Question 160 of 280

□ □

A 41-year-old man is admitted to the Emergency Department after having a seizure. He has no history of epilepsy but is known to be HIV positive. On examination he is still slightly confused post-ictally but there are no focal neurological signs. He is afebrile and haemodynamically stable.

His current medications include efavirenz, tenofovir, lamivudine and co-trimoxazole.

His latest CD4 count is 38 cells/ μ l.

CT scan (without contrast) is shown below:



© Image used on license from Radiopaedia



What is the most likely diagnosis?

	Cerebral toxoplasmosis
	Progressive multifocal leukoencephalopathy
	Cryptococcal infection
	CNS lymphoma
	Cerebral tuberculosis

Dashboard

Overall score: 0%

1 -

□ Question 160 of 280

□ □

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Dashboard

Overall score: 0%

1 -

Question 160 of 280



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Overall score: 0%

1 -

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[Back to top](#)



Question 160 of 280

□ □

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Overall score: **0%**

1 -



Question 160 of 280

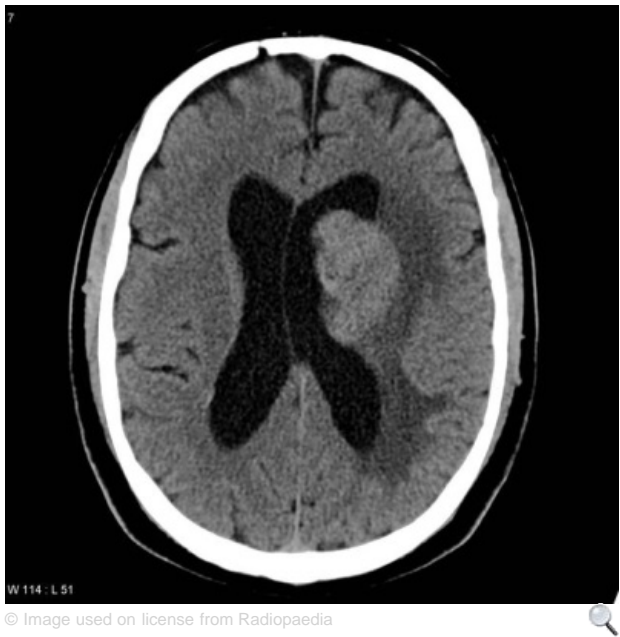
□ □

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Overall score: 0%

1 -

7



W 114 : L 51

Question 160 of 280

□ □

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© Image used on license from Radiopaedia

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	Progressive multifocal leukoencephalopathy
	Cryptococcal infection
	CNS lymphoma
	Cerebral tuberculosis

Overall score: **0%**

1 -



Question 161 of 280

□ □

A 68-year-old man develops a left-sided hemiparesis and facial droop whilst out shopping with his wife at 14:35pm. His initial CT head scan is done at 15:40pm and reveals no intracranial haemorrhage or space occupying lesion. He is given alteplase in the emergency department at 15:50pm.

His post-thrombolysis CT head at 09:00am the following morning reveals a right middle cerebral artery infarction and no evidence of intracranial haemorrhage or haemorrhagic transformation. A 12 lead ECG done in the stroke unit shows atrial fibrillation of 110 beats per minute. He has a persisting dense left-sided weakness several hours post thrombolysis.

Which of the following drugs should be added next?

	Clopidogrel
	Aspirin
	Warfarin
	Unfractionated heparin
	Rivaroxaban

Dashboard

Overall score: 0%

1 -

Question 161 of 280

□ □

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	Aspirin
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Dashboard

Overall score: **0%**

1 -

□ Question 162 of 280



A 63-year-old man presents to the emergency department with a 5-minute episode of slurred speech earlier in the day. His wife noticed that his face was drooping to one side as well. He had no arm weakness and is now completely back to normal. He is normally well and on no regular medication and is not allergic to any medication. He works as a plumber and smokes 10 cigarettes per day for the last 40 years and drinks alcohol socially. On further questioning he mentions that he had a similar episode also lasting 5 minutes four days ago whilst at work. On examination, his blood pressure is 135/70 mmHg and his heart rate is 58/min. He has no focal neurology and his cardiovascular and respiratory examinations are unremarkable. He has been given 300mg of Aspirin by the paramedics.

His blood tests are as follows:

Hb	138 g/l
Platelets	$283 \times 10^9/l$
WBC	$8.1 \times 10^9/l$
INR	1.1
PT	13 seconds

Na ⁺	142 mmol/l
K ⁺	4.4 mmol/l
Urea	6.4 mmol/l
Creatinine	89 μ mol/l
CRP	5 mg/l
Total cholesterol	3.8 mmol/l
HDL	1.3 mmol/l

His ECG shows normal sinus rhythm and rate of 65/min.

What is the most appropriate management for this patient?

	Outpatient TIA clinic appointment
	Outpatient CT head and carotid dopplers within the next week
	Admit for urgent (< 24 hours) CT head & carotid dopplers
	Thrombolysis
	Long term clopidogrel

Dashboard

Overall score: 0%

1 -

□ Question 162 of 280



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Dashboard

Overall score: 0%

1 -

Question 163 of 280



A 57 year-old smoker presents to you with difficulty walking. He used to be able to mobilise unaided but recently he has required the assistance of his wife. He reports being more clumsy than usual. He drinks 3 cans of larger every month. He takes simvastatin for high cholesterol and has been taking aspirin for 10 years since his GP started it. He has lost a lot of weight in recent months, which he can't quantify.

On examination you find that he is cachectic. He has an intention tremor and exhibits dysdiadochokinesia. His gait is broad based. He has bilateral nystagmus on horizontal gaze. On auscultating his chest you find he has a degree of bronchial breathing on the right middle lobe. His observations are unremarkable.

His blood tests are as follows:

Hb	100 g/l
MCV	79.9 fL
Platelets	239 * 10 ⁹ /l
WBC	6.6 * 10 ⁹ /l
Na ⁺	134 mmol/l
K ⁺	4.3 mmol/l
Urea	6 mmol/l
Creatinine	88 µmol/l
anti-Hu antibody	POSITIVE
Bilirubin	6 µmol/l
ALP	62 u/l
Albumin	29 g/l

CT head: No acute intracranial pathology.

What is the most appropriate investigation?

	Chest X-ray
	Vitamin B12 levels
	ECG
	Visual evoked potentials
	Muscle biopsy

Dashboard

Overall score: 0%

1 -

Question 163 of 280



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	Vitamin B12 levels
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	Muscle biopsy

Dashboard

Overall score: 0%

1 -

Question 164 of 280

You are seeing a 25-year-old woman in neurology outpatients clinic who has been struggling with her migraines for the past 7 years. She has to use abortive medication five to six times a month and she still has issues with her control, with migraines often lasting half a week. Over the seven years she has tried three different triptans, and combinations of NSAIDs (non-steroidal anti-inflammatory drugs), paracetamol and triptans with limited success. Two years ago she had a trial without medication for three months and her headaches got significantly worse. The only other medication that she takes is the combined oral contraceptive pill.

What would be the next step in achieving migraine control?

	Topiramate
	Pizotifen
	Propranolol
	Acupuncture
	Re-attempt withdrawal of medication

Dashboard

Overall score: 0%

1 -

Question 164 of 280

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	Topiramate
	Pizotifen
	Propranolol
	Acupuncture
	Re-attempt withdrawal of medication

Dashboard

Overall score: 0%

1 -

Question 165 of 280

□ □

A 35-year old gentleman presents with weakness raising up his arms and some drooping of the eyelids and his shoulder blades are pronounced. He says his symptoms are mild and he probably would not have noticed it except his father had similar symptoms that have steadily got worse. This gentleman has no other past medical history of note and is taking no regular medications. On examination there is mild evidence of scapula winging, proximal weakness of both upper limbs, ptosis and he has difficulty whistling. There is normal power of his lower limbs and reflexes and sensation is intact throughout.

Creatine kinase	220 units/L
-----------------	-------------

A muscle biopsy is sent but is pending, what is the most likely diagnosis?

	Facioscapulohumeral dystrophy
	Myotonic dystrophy
	Emery-Dreifuss muscular dystrophy
	Becker muscular dystrophy
	Oculopharyngeal muscular dystrophy

Dashboard

Overall score: 0%

1 -

□ Question 165 of 280

□ □

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	Becker muscular dystrophy
	Oculopharyngeal muscular dystrophy

Dashboard

Overall score: **0%**

1 -

Question 166 of 280



An 84-year-old male is reviewed in clinic after a 7-month history of progressive confusion, unsteadiness on his feet and new urinary incontinence. He had previously minimal past medical history and continued to volunteer at his local charity shop, taking ramipril alone for hypertension. On examination, his abbreviated mental test score was 2/10, his gait was wide based and ataxic. A mini-mental state examination scores 17/30. His urine dip demonstrated no positive findings and serum results were unremarkable. Although there has been no history of head trauma, a CT head was performed, demonstrated no acute haemorrhages or infarcts. A subsequent MRI demonstrated large ventricles with periventricular white matter changes. Lumbar puncture demonstrated acellular cerebrospinal fluid with no organism growth. Opening pressure was 16 cm H2O. You arrange a CSF infusion test, demonstrating raised CSF outflow resistance. Which treatment is most appropriate?

	Therapeutic repeat lumbar punctures
	Ventriculoperitoneal shunt
	Donepezil
	Acetazolamide
	Aspirin 300mg

Dashboard

Overall score: 0%

1 -

Question 166 of 280



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	Therapeutic repeat lumbar punctures
	Ventriculoperitoneal shunt
	Donepezil
	Acetazolamide
	Aspirin 300mg

Dashboard

Overall score: 0%

1 -

Question 167 of 280

□ □

A 72-year-old male diagnosed with dementia after a one-year history of progressive cognitive decline, particularly in planning, cognitive flexibility, attention, visual memory and visuospatial manipulation on detailed neuropsychological assessments. His mini-mental state examination scores 15/30. His past medical history includes Parkinson's disease, for which he was started on Madopar 6 years ago. His son attends clinic with his father and both are very keen to start some treatment. What is the most available treatment?

	No treatment
	Rivastigmine
	Donepezil
	Increase Madopar dose
	Deep brain stimulation

Dashboard

Overall score: 0%

1 -

Question 167 of 280

□ □

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	No treatment
	Rivastigmine
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	Increase Madopar dose
	Deep brain stimulation

Dashboard

Overall score: **0%**

1 -

□ Question 168 of 280



A 53 year-old businessman presents to the neurology clinic complaining of weakness and numbness affecting his left hand. One month ago he was irritated when he noticed that the little finger of his left hand was often getting caught when he tried to put his hand in his pocket. Since then he has noticed progressive difficulty using the left hand, associated with an unpleasant tingling sensation.

In the last two weeks he has also noticed difficulty walking, and has tripped over on several occasions. When driving he finds that his right foot often becomes stuck behind the accelerator pedal and he struggles to lift it out.

On examination, in the left hand sensation to pin-prick is diminished over the little finger and medial side of the ring finger, as well as the medial side of the palm. There is weakness of finger abduction and adduction, but thumb abduction is normal. On examination of the legs, you note diminished sensation over the lateral aspect of the right calf, as well as the dorsum of the right foot. When asked to walk on his heels, he finds it difficult to do so, and trips over the right foot.

Investigations are as follows:

Haemoglobin	14.2 g/dl
WCC	$7.1 \times 10^9/l$
Platelets	$420 \times 10^9/l$
ESR	65 mm/hr

Na ⁺	139 mmol/l
K ⁺	4.3 mmol/l
Urea	13.2 mmol/l
Creatinine	171 μ mol/l
Corrected calcium	2.26 mmol/l

ANCA	Positive, with perinuclear staining pattern

PR3 antibodies	Negative
MPO antibodies	Positive

Urine dipstick	+++ blood, +++ protein
Urine microscopy	Red cell casts

Chest radiograph	Clear
------------------	-------

What is the most likely diagnosis?

	Microscopic polyangiitis
	Polyarteritis nodosa
	Wegeners granulomatosis
	Diabetes mellitus
	Entrapment neuropathy

Dashboard

Overall score: 0%

1 -

□ Question 168 of 280



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	Diabetes mellitus
	Entrapment neuropathy

Dashboard

Overall score: 0%

1 -

Question 169 of 280

A 23 year-old artist presents after he woke up with headache, neck stiffness, and photophobia. He is normally fit and well, but for the last three weeks has complained of feeling tired and irritable.

On examination, the left side of the palate does not elevate, and the tongue is deviated to the left upon protrusion. The remainder of the neurological examination is unremarkable.

Plain computed tomography of the head is unremarkable.

Lumbar puncture is performed with results of CSF analysis as follows:

Appearance	Turbid
White blood cells	28 cells/mm ³ (95% lymphocytes)
Red blood cells	<1 cells/mm ³
Gram stain	No organisms seen
Protein	1.32 g/L
Glucose	1.4 mmol/L
Serum glucose	7.5 mmol/L

What is the most likely diagnosis?

<input type="checkbox"/>	Meningococcal meningitis
<input type="checkbox"/>	Tuberculous meningitis
<input type="checkbox"/>	Subarachnoid haemorrhage
<input type="checkbox"/>	Skull base tumour
<input type="checkbox"/>	Malignant meningitis

Dashboard

Overall score: **0%**

1 -

Question 169 of 280

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Dashboard

Overall score: **0%**

1 -

Question 170 of 280

□ □

A 23-year-old male presents with a 5-day history of increasing shortness of breath, exertional dyspnoea and bilateral ankle swelling. He has no previous past medical history and was previous a keen sportsman. On examination, his heart sounds I + II are present with a pansystolic murmur and a displaced apex. Auscultation of his chest demonstrates bibasal crackles. His ECG demonstrates a PR interval of 190 ms but sinus rhythm. Further neurological examination demonstrates bilateral partial ptosis noted associated with bilateral foot drop. You also note slow release of finger flexion. What is the underlying diagnosis?

	Myotonic dystrophy
	Myasthenia gravis
	Inflammatory myositis
	Facioscapulohumeral dystrophy (FSD)
	Guillain Barre syndrome

Dashboard

Overall score: 0%

1 -

Question 170 of 280

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Dashboard

Overall score: **0%**

1 -

Question 171 of 280

□ □

A 32 year-old accountant presents to the neurology clinic.

For the last year he has been troubled by severe headaches. These occur in the morning, sometimes waking him from sleep. There is a sudden onset of stabbing pain behind the left eye, at the onset of which he feels the need to pace around the room, pounding his head in an effort to ease the pain. During the attacks his left eye is watery and his nose is congested. On more than one occasion he has noticed that his right pupil appears enlarged during the attacks. He tells you very clearly that the pain is so severe that at times during the attacks he has considered jumping out of the top floor of the office building where he works. Each attack lasts one or two hours, and between the attacks he feels fine.

He shows you a detailed headache diary in which he has documented every attack over the last year. For example, in January he had a period of nine days in which attacks occurred several times daily, but in February and March he was headache free. During April he developed severe headaches which occurred almost every day until June. He then had another period of relief until August, and so on.

He has no other past medical history and no allergies.

Examination is unremarkable.

What is the best treatment for prophylaxis of this man's headaches?

	100% oxygen
	Verapamil
	Sumatriptan
	Propranolol
	Lithium

Overall score: **0%**

1 -

Question 171 of 280

□ □

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For the last year he has been troubled by severe headaches. These occur in the morning, sometimes waking him from sleep. There is a sudden onset of stabbing pain behind the left eye, at the onset of which he feels the need to pace around the room, pounding his head in an effort to ease the pain. During the attacks his left eye is watery and his nose is congested. On more than one occasion he has noticed that his right pupil appears enlarged during the attacks. He tells you very clearly that the pain is so severe that at times during the attacks he has considered jumping out of the top floor of the office building where he works. Each attack lasts one or two hours, and between the attacks he feels fine.

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	Verapamil
	Sumatriptan
	Propranolol
	Lithium

Overall score: **0%**

1 -

□ Question 172 of 280



A 20-year-old man is referred to neurology after presenting at the emergency department. The patient reported suffering a head injury during a rugby match approximately 24 hours ago. He had presented to the hospital due to symptoms of an ongoing headache and an inability to concentrate when he had returned to work that morning.

The patient had hit his head on the knee of another player while attempting to make a tackle. The patient did not lose consciousness after his injury but had been mildly disorientated and so took no further part in the match. The patient had gone home to rest and had experienced a moderate generalised headache that had not responded to paracetamol. Ever since the injury he described feeling 'in a fog' and had had a disrupted night's sleep. At no point after the injury had the patient lost consciousness, suffered a seizure or vomited. The patient also denied any pain or discomfort associated with his neck.

The patient was normally in excellent physical health with no significant previous medical problems. In particular, the patient had no personal or family history of bleeding or clotting disorders. The patient took no regular medications and had no known drug allergies. The patient was a semi-professional rugby player who worked part-time in a coffee shop.

The patient was alert and fully orientated to time, place and person. External examination of the patient's head and neck was unremarkable; in particular, there was no significant bruising to the patient's orbits or behind his ears and there was no evidence of haemotympanum. No evidence of focal neurology was found on detailed examination of the patient's cranial nerves and peripheral nervous system.

What is the appropriate initial management of the patient's head injury?

	Resume normal activities but avoid contact sports for 7 days
	CT brain scan within 8 hours of presentation
	MRI brain scan within 24 hours of presentation
	Complete physical and mental rest for 2-3 days
	Admit to hospital for observation for 48 hours

Overall score: **0%**

1 -

□ Question 172 of 280



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Dashboard

Overall score: **0%**

1 -

Question 173 of 280

A 17 year old Caucasian male with no past medical history presents with his first episode of sudden onset left leg weakness and numbness on his anterior left thigh, of sudden onset and persistent after 4 days. On examination, you note 3/5 weakness on flexion of his left hip and loss of sensation to light touch, pain and temperature on his anterior left thigh in the sensory nerve root L1 distribution. A contrasted MRI scan of the patients spine reveals a hyperintense T2 signal partially within the left side of the cord at the L1, with corresponding enhancement with gadolinium. No masses were observed. Further imaging of the brain is awaited. What is the diagnosis at present?

<input type="checkbox"/>	Multiple sclerosis
<input type="checkbox"/>	Left spinal cord tumour
<input type="checkbox"/>	Left anterior spinal ischaemic stroke
<input type="checkbox"/>	Left transverse myelitis
<input type="checkbox"/>	Guillain Barre syndrome

Dashboard

Overall score: **0%**

1 -

Question 173 of 280

□ □

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	Multiple sclerosis
	Left spinal cord tumour
	Left anterior spinal ischaemic stroke
	Left transverse myelitis
	Guillain Barre syndrome

Dashboard

Overall score: **0%**

1 -

Question 174 of 280



You are working in a neurology outpatient clinic seeing a patient referred from a local GP clinic. He's a 42-year-old man who has been troubled by severe headaches over the past half a year. These headaches are the worse that he's ever had in his life, describing them as far worse than the compound fracture he sustained three years ago. These headaches tend to happen most nights at around 2am just after he falls asleep. He often paces around his kitchen for a couple of hours and often resorts to bashing his head against the fridge the pain is so bad. When probed further he mentioned that he gets a sense of fullness in his right ear (which is the side that the headache most often occurs on). He remembers having a similar problem a couple of years ago that lasted a few months before resolving on their own.

What medication is most likely to prevent these headaches?

	Oral triptan
	Home oxygen
	Pizotifen
	Propranolol
	Verapamil

Dashboard

Overall score: 0%

1 -

Question 174 of 280



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What medication is most likely to prevent these headaches?

	Oral triptan
	Home oxygen
	Pizotifen
	Propranolol
	Verapamil

Dashboard

Overall score: 0%

1 -

Question 175 of 280

□ □

A 25-year-old female presents to clinic complaining of weakness in her upper and lower limbs primarily in the evening, most noticeable when walking up stairs. She is also having trouble keeping her eyes open when driving long distances but denies feeling tired.

On examination, she develops bilateral ptosis when staring upwards for an extended period and her proximal arm strength pathologically fatigues after repeated exertion.

Her nerve conduction tests reveal a decrement in the amplitude of the compound muscle action potential on repetitive nerve stimulation.

Before commencing immune suppression for a patient with the syndrome described above, which of the following medications may provide symptomatic relief?

	Pyridostigmine
	Propranolol
	Donepezil
	Baclofen
	Modafinil

Dashboard

Overall score: 0%

1 -

Question 175 of 280

□ □

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Dashboard

Overall score: **0%**

1 -

□ Question 176 of 280



A 60-year-old male with a history of hypercholesterolaemia is brought to the emergency department with a 3-hour history of right sided body weakness and an inability to talk. The weakness was gradual in onset and has been progressing thereafter.

The patient has a history of peptic ulcer disease secondary to H.Pylori infection. He was treated with omeprazole, clarithromycin and amoxicillin-clavulanic acid. A recent upper GI endoscopy done 2 months ago was normal.

His medication includes omeprazole 20mg daily, atorvastatin 40mg daily and he takes paracetamol occasionally for joint pains.

On examination, he has a blood pressure of 140/80mmHg. He is aphasic, the tone on the right side is increased with the muscle power being 2/5 in the right upper limb proximally and distally while it is 1/5 in the lower limb both proximally and distally. There is no evidence of meningeal irritation and his pupils are normal.

Lab investigations reveal

Hb	150 g/l
Platelets	450 * 10 ⁹ /l
WBC	13.0 * 10 ⁹ /l

Na ⁺	138 mmol/l
K ⁺	4.4 mmol/l
Urea	6.9 mmol/l
Creatinine	118 µmol/l

ECG: Sinus tachycardia with occasional ventricular ectopics

CT scan brain: no evidence of cerebral haemorrhage, suspected left middle cerebral artery infarction.

What is the most appropriate management option for this patient?

	Aspirin, clopidogrel, IV fluids and bowel and bladder care
	Thrombolysis with alteplase
	Modified release dipyridamole
	Anticoagulation with LMWH
	Anticoagulation with apixaban

Dashboard

Overall score: 0%

1 -

□ Question 176 of 280



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Dashboard

Overall score: 0%

1 -

Question 177 of 280

□ □

A 64-year-old woman attends neurology clinic after referral from her GP with intermittent episodes of facial pain. She had first noticed symptoms around 10 months previously and recalled her first attack had occurred when taking her grand-children to a fireworks display. Pain episodes were described as a severe 'sawing' pain affecting the right side of her face that lasted one to two minutes before resolving completely. Since the onset the patient reported suffering from at least one attack on most days, with the frequency seeming to increase over time. On direct questioning she reported that on some occasions her nose had become blocked and she had felt sweaty during an episode but that these symptoms were not a major concern in comparison to the severe pain. The patient denied any other symptoms either at the time of the attack and was otherwise in good health with no recent history of weight loss. There was no family history of neurological disease.

A full neurological examination was performed with particular findings of normal pupillary reflexes, visual acuity and colour vision. There was no evidence of facial sensory deficit or facial nerve palsy. A peripheral neurological examination was likewise unremarkable.

Helpfully (although uncomfortably for the patient), a new episode of pain began during the course of the consultation. A further examination was conducted and conjunctival injection and slight eyelid oedema of the right eye were noted. In addition, the patient was noted to be sweating, markedly more profuse on the right side of her face. She also confirmed the onset of a blocked nose sensation at the onset of pain.

What is the most likely diagnosis causing the patients symptoms?

	Trigeminal neuralgia
	Multiple sclerosis
	Horners syndrome
	Short unilateral neuralgiform pain with autonomic symptoms
	Atypical trigeminal neuralgia

Overall score: **0%**

1 -

Question 177 of 280

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Overall score: **0%**

1 -

Question 178 of 280

□ □

A 25 year old man presented to the Emergency Department with acute onset, rapidly progressive weakness in all the four limbs following a bout of severe colicky abdominal pain which lasted for 10 days but eventually subsided. The abdominal pain was located around the umbilicus, stabbing in nature, radiated towards the back, and was associated with nausea and intermittent constipation. Patient reports weakness originating in both arms then affecting both the lower limbs. He also complains of difficulty in closing his lips and eyes, and has uncontrolled salivation from the angles of the mouth. He denied any history of paraesthesia, sphincteric disturbances, epileptic fits or dark colored urine during any of the episodes. No definite history of any drug intake prior to both the episodes could be ascertained.

Physical examination revealed bilateral facial palsy of lower motor neuron (LMN) type together with flaccid quadriparesis which was more marked distally with bilateral wrist drop. Deep tendon reflexes were diminished in both upper and lower limbs. There was no sensory loss.

Initial lab values showed WBCs $8.9 \times 10^9/L$, Hemoglobin of 12g/L, Sodium of 132mmol/L, and ESR of 35mm/Hr. His temperature was 36.5 C and pulse 83/min. His blood pressure was 130/83 mm/Hg and oxygen saturations were 98% on air. A lumbar puncture was performed and CSF studies were normal.

Which of the following is most likely to be diagnostic?

	CT scan with contrast of abdomen
	MRI brain with contrast
	Urine screen for Vanillylmandelic acid (VMA)
	Urine screen for Aminolevulinic Acid (ALA) and Porphobilinogen (PBG)
	Measurement of urinary and stool porphyrins

Dashboard

Overall score: 0%

Question 178 of 280

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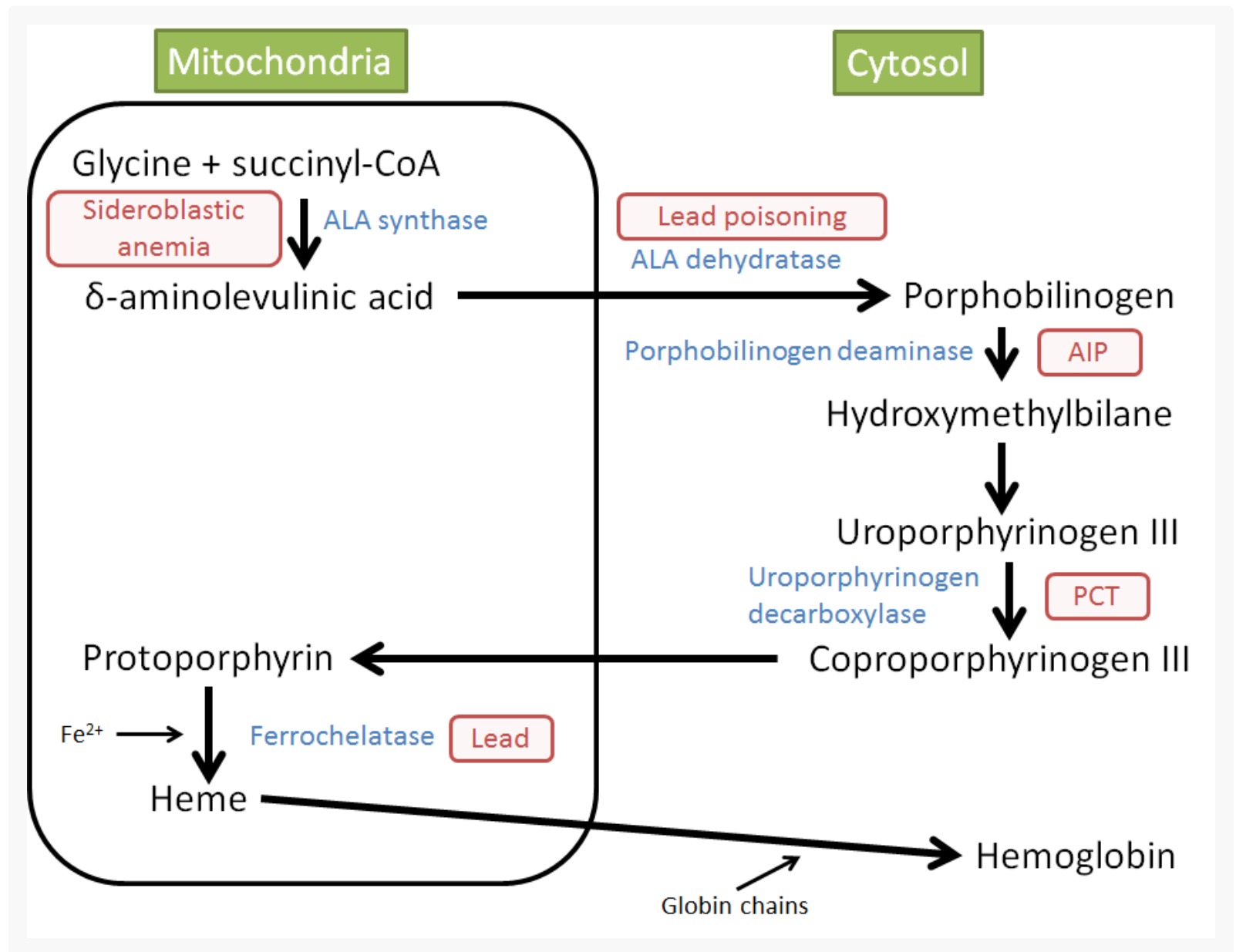
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Dashboard

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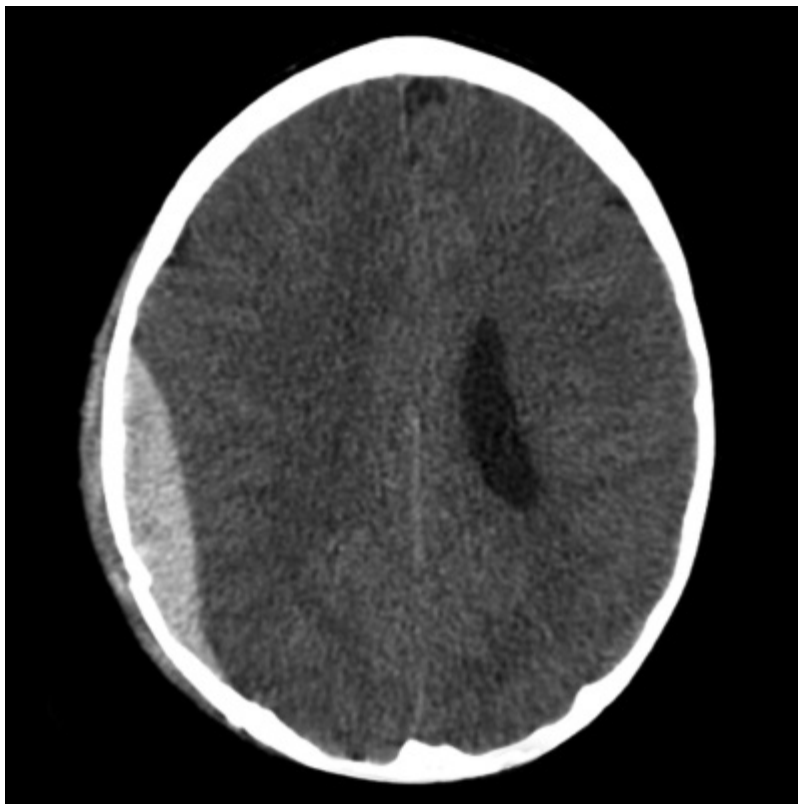
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□ Question 179 of 280

□ □

A 7-year-old boy falls from the top of a slide and is taken to the Emergency Department. He is crying, complaining of a severe headache and regularly vomiting. A CT head is performed:



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What does the scan show?

	Subarachnoid haemorrhage
	Brain contusion

	Extradural haematoma
	Subdural haematoma
	Meningioma

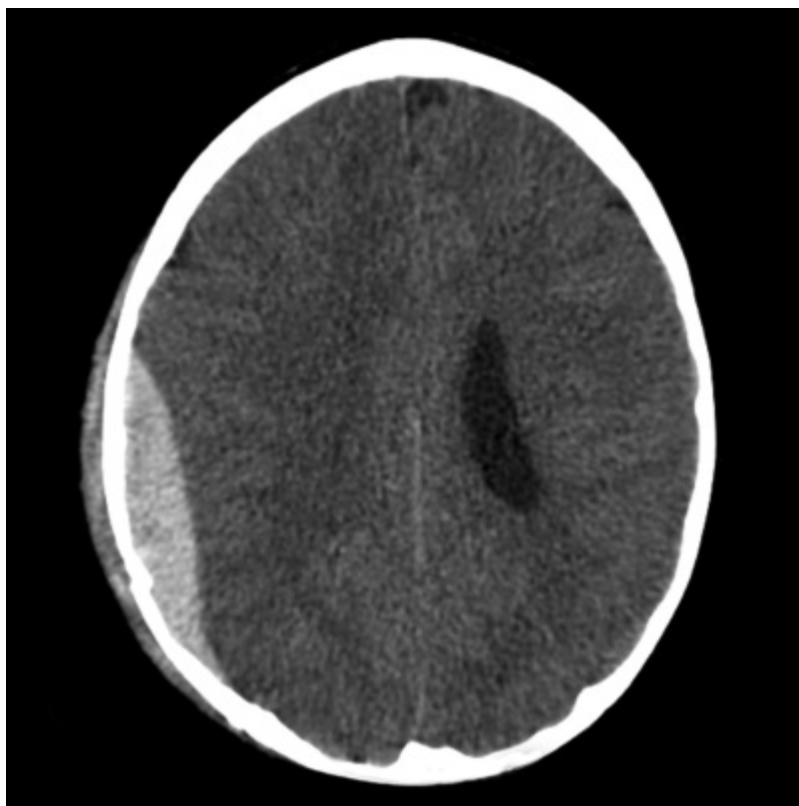
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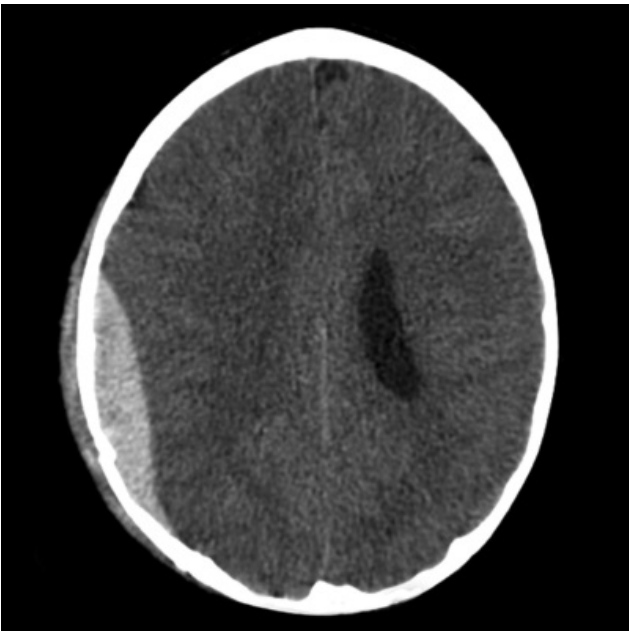
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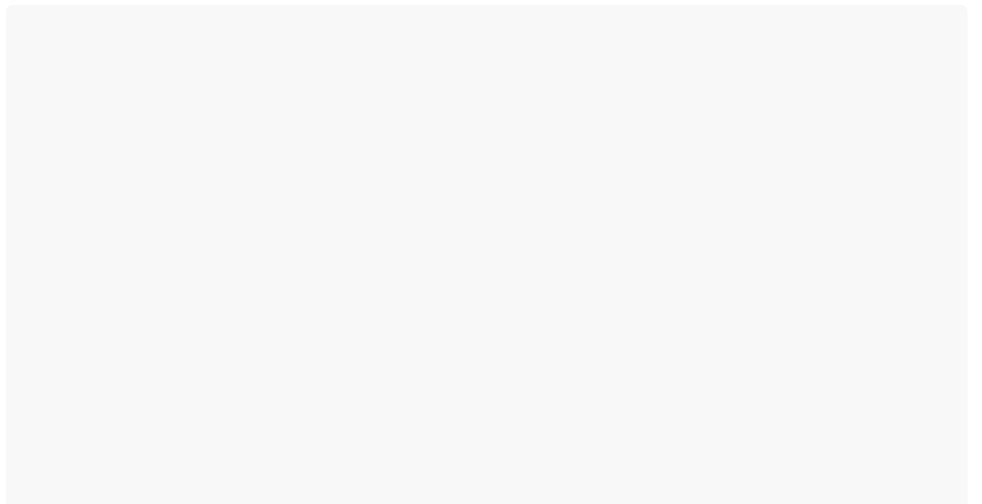
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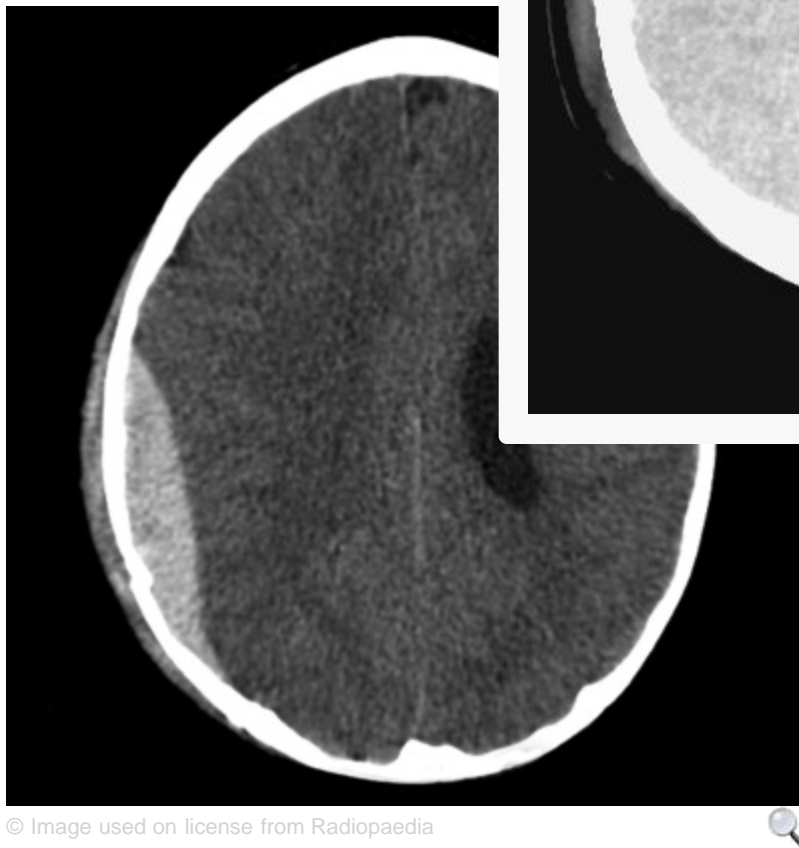
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□ Question 179 of 280

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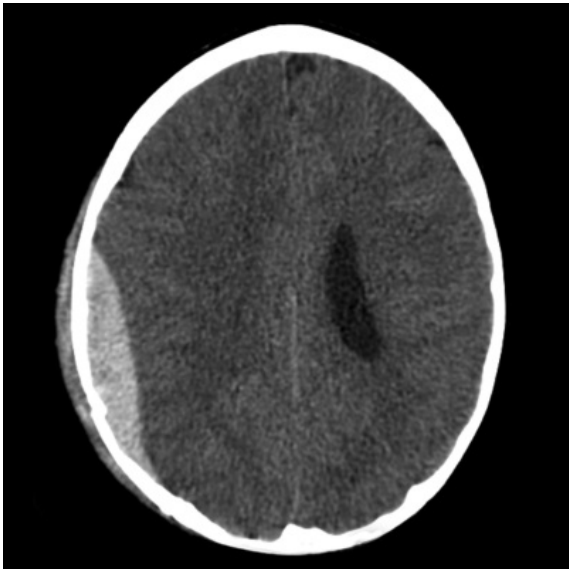
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Question 179 of 280



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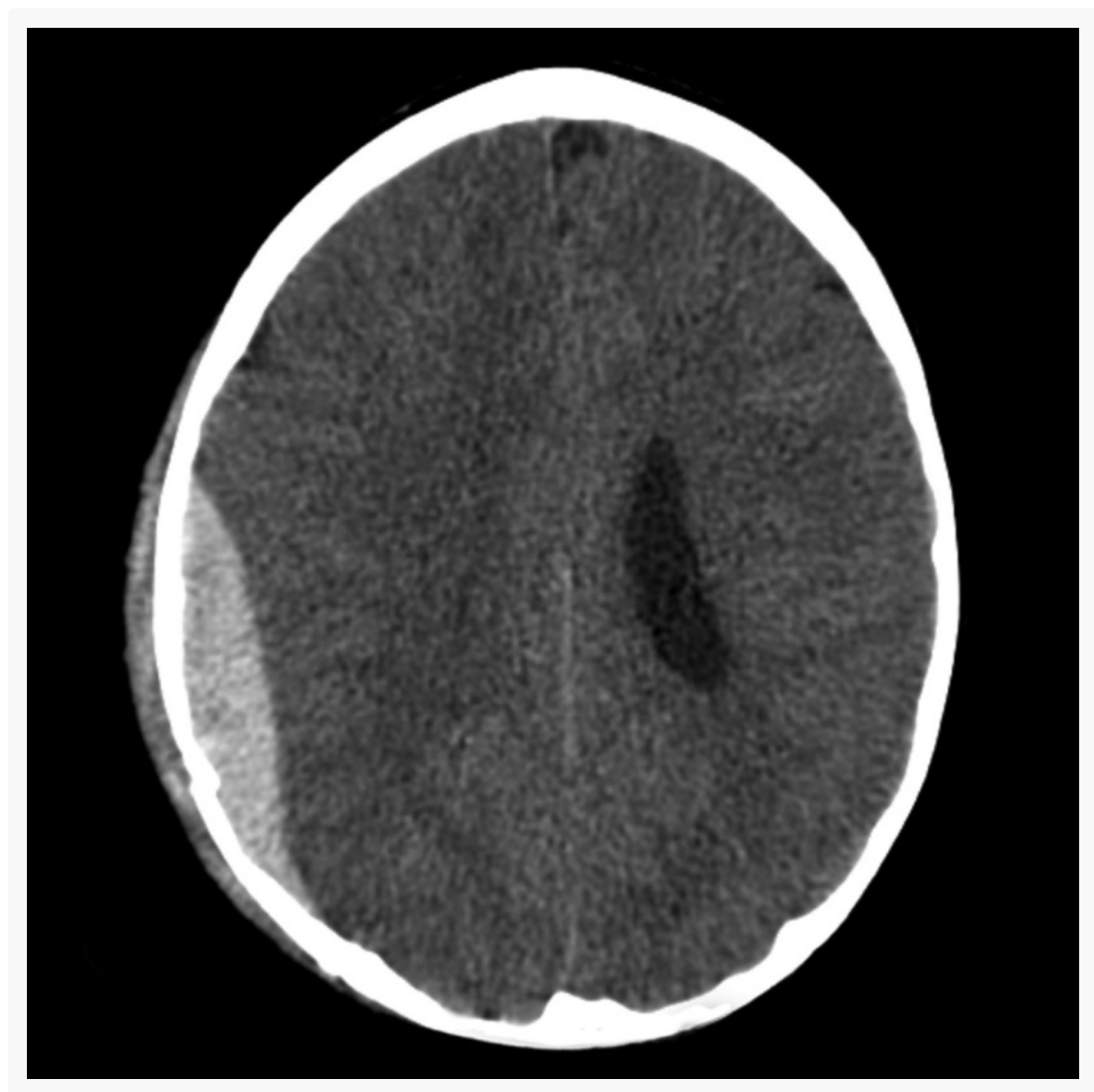
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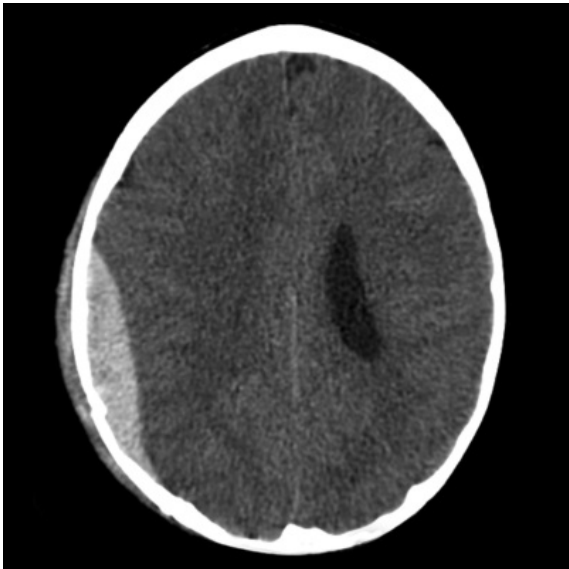
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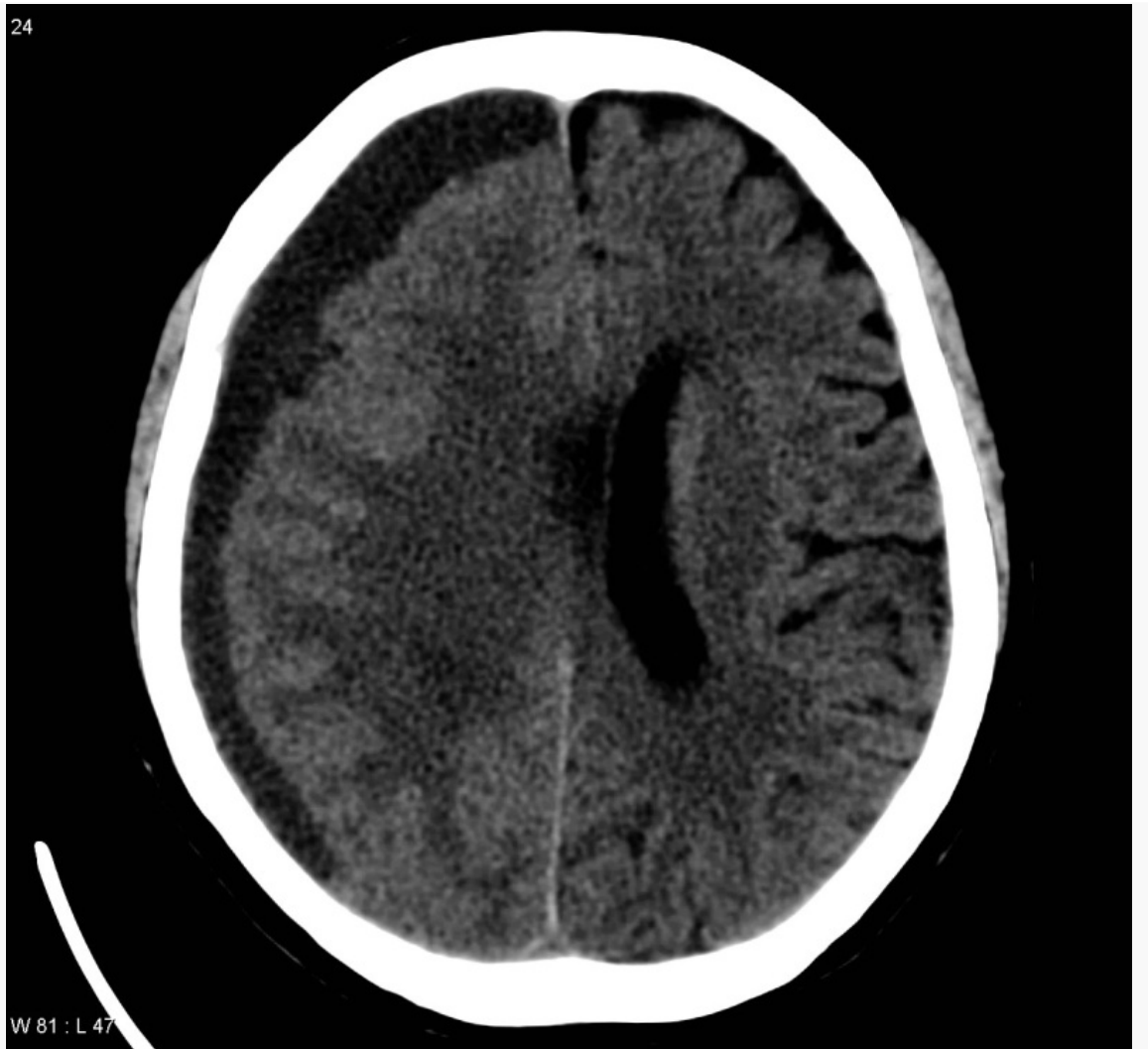
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	Brain contusion
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Dashboard

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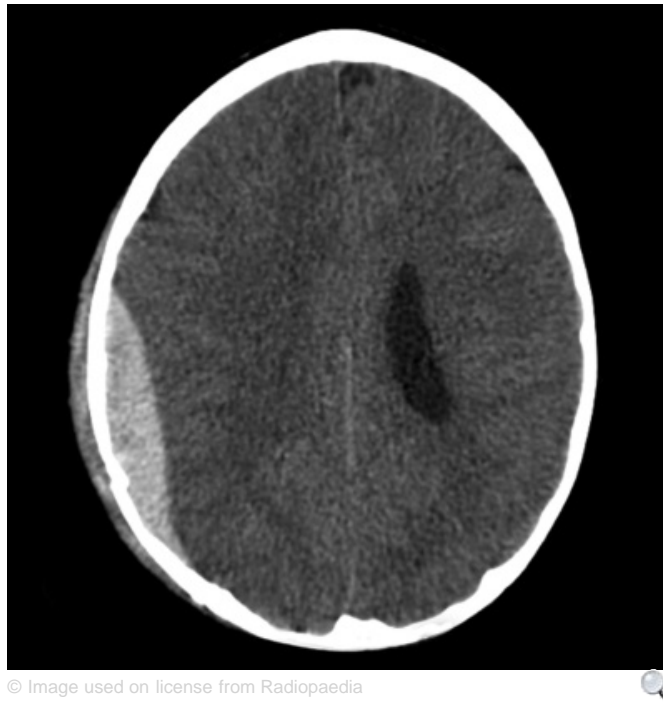
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□ Question 179 of 280

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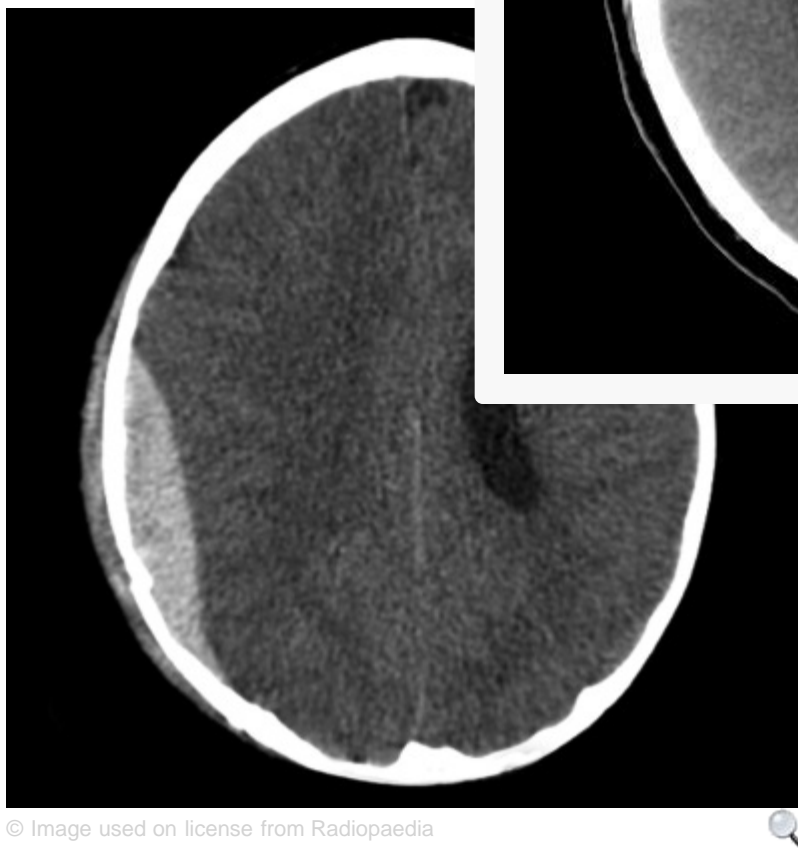
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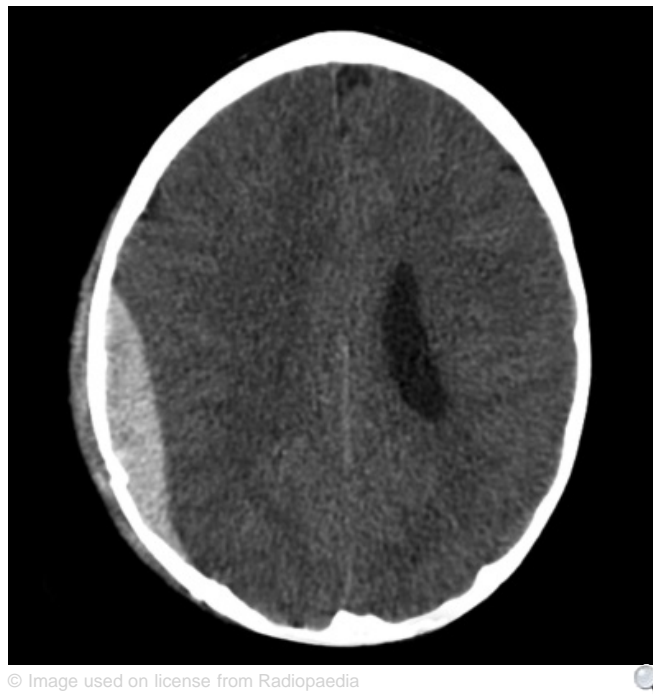
Dashboard

Overall score: **0%**
1 -

Question 179 of 280

□ □

A 7-year-old boy falls from the top of a slide and is taken to the Emergency Department. He is crying, complaining of a severe headache and regularly vomiting. A CT head is performed:



What does the scan show?

	Subarachnoid haemorrhage
	Brain contusion

	Extradural haematoma
	Subdural haematoma
	Meningioma

Dashboard

Overall score: **0%**
1 -



Question 180 of 280

□ □

A 64 year-old man presents to the Emergency Department with his family. His wife is concerned about his behaviour during the past week. He has been intermittently confused, and sleeping during the day. Both of which is abnormal for him.

On examination, he is alert and looks well. He has mild neck stiffness, with no photophobia. The rest of the neurological examination is normal.

A CT scan reveals no abnormality.

An electroencephalography shows generalised slowing.

Hb	130 g/l
Platelets	$232 \times 10^9/l$
WBC	$14 \times 10^9/l$
Serum glucose	9 mmol/L

Which lumbar puncture result would most likely support your diagnosis?

	Opening pressure: 14 cm H ₂ O WCC- 2 cells/ μ L Glucose- 7 Protein- 30 mg/dL
	Opening pressure: 28 cm H ₂ O WCC- 500 cells/ μ L (>90% polymorphonucleocytes) Glucose- 3.5 Protein- 65 mg/dL
	Opening pressure: 18 cm H ₂ O WCC- 5 cells/ μ L Glucose- 8

	Protein- 65 mg/d
	Opening pressure: 22 cm H2O WCC- 100 cells/μL (lymphocytic predominance) Glucose- 8 Protein- 54 mg/d
	Opening pressure: 33 cm H2O WCC- 450 cells/μL Glucose- 2 Protein- 65 mg/d

Dashboard

Overall score: **0%**

1 -

Question 180 of 280

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Question 180 of 280

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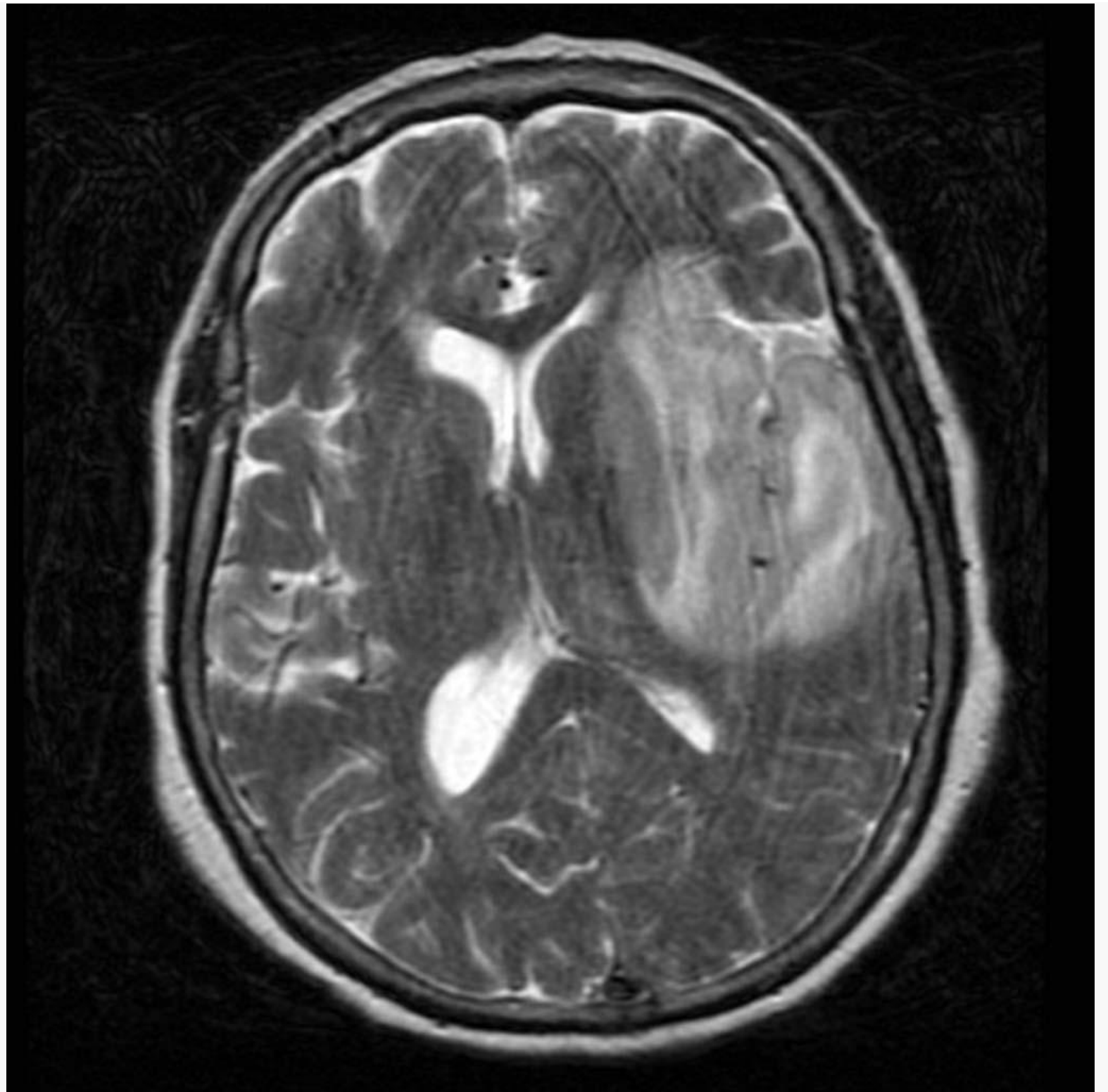
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Dashboard

Overall score: **0%**
1 -



Question 181 of 280

□ □

A 45 year old male is brought into A&E by his partner. He is known to be HIV +ve and his partner reports good compliance with his medications since his diagnosis 4 years ago. A collateral history reveals persistent confusion over the past 3 weeks. His past medical history includes outpatient treatment 2 years ago for lymphogranuloma venereum and type 2 diabetes mellitus. On examination, the patient is not orientated in time or place. He scores 0/10 on the abbreviated mental test. Both heart sounds are present, include a mild early diastolic murmur. Neurological examination is difficult due to poor patient compliance but you note absent reflexes in both lower limbs, with an upgoing plantar on the left and withdrawn plantar on the right. You also note that he has erythematous soles on both feet. Blood tests and blood glucose are awaited. What is the most likely diagnosis?

	Subacute combined degeneration of the cord
	Motor neurone disease
	Neurosyphilis
	Hypoglycaemia and diabetic peripheral neuropathy
	HIV dementia and peripheral neuropathy

Dashboard

Overall score: 0%

1 -

Question 181 of 280

□ □

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	Neurosyphilis
	Hypoglycaemia and diabetic peripheral neuropathy
	HIV dementia and peripheral neuropathy

Dashboard

Overall score: **0%**

1 -

Question 181 of 280

A 45 year old male is brought to the hospital with a 3 week history of decreased compliance with his medication. He has a past medical history of hypertension and type 2 diabetes mellitus. His past medical history is abbreviated mental test. Blood glucose is difficult due to poor patient compliance. The left and withdrawn plantar blood glucose are awaited.



	Subacute combined degeneration of the spinal cord
	Motor neurone disease
	Neurosyphillis
	Hypoglycaemia and diabetic peripheral neuropathy
	HIV dementia and peripheral neuropathy

Dashboard


Overall score: 0%

1 -

Question 181 of 280

A 45 year old male is brought into A&E by his partner. He has good compliance with his medications since his diagnosis of type 2 diabetes mellitus the past 3 weeks. His past medical history includes hypertension and type 2 diabetes mellitus. On examination, the patient is alert and oriented to person, place, and time. He has a normal physical examination and an abbreviated mental test. Both heart sounds are present and normal. His blood pressure is 140/90 mmHg. His blood glucose is 180 mg/dL. His blood is difficult to draw due to poor patient compliance but you note a normal hemoglobin of 14 g/dL. The left and withdrawn plantar on the right. You also note a normal blood glucose of 180 mg/dL. What is the most likely cause of his symptoms?



	Subacute combined degeneration of the cord	
	Motor neurone disease	
	Neurosyphilis	
	Hypoglycaemia and diabetic peripheral neuropathy	
	HIV dementia and peripheral neuropathy	

Dashboard

Overall score: **0%**

1 -

Question 182 of 280

□ □

A 37 year old Japanese female presents with her second episode of loss of colour vision and significant visual acuity impairment in both eyes. Three days later, she complains of vomiting, acute urinary retention, requiring urinary catheter insertion, and inability to move either leg. On examination, she was unable to correctly name any Ishihara plates. A MRI of her brain and spine demonstrates multiple hyperintense T2 white matter lesions in her spine suggestive of demyelination, one of which extends from C5 to T1. Which investigation confirms the diagnosis?

	Lumbar puncture for oligoclonal bands
	Repeat MRI spine with diffusion weighting
	Serum aquaporin 4 antibody
	Serum anti-NMDA antibody
	Repeat MRI spine with gadolinium contrast

Dashboard

Overall score: 0%

1 -

Question 182 of 280

□ □

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	Serum anti-NMDA antibody
	Repeat MRI spine with gadolinium contrast

Dashboard

Overall score: **0%**

1 -

Question 183 of 280



The emergency department registrar asks for your advice regarding a 67 year-old female patient who presented with an acutely painful right eye. On examination the right pupil is fixed in mid-dilation and not responsive to light. The conjunctiva is injected. The patient is clearly in considerable pain and has vomited twice in the department. The emergency department physicians have given intravenous analgesia and anti-emetics. You refer urgently to ophthalmology.

What is appropriate initial treatment?

	Topical pilocarpine
	Urgent iridotomy
	IV acetazolamide
	Topical latanoprost
	Topical brimonidine

Dashboard

Overall score: 0%

1 -

Question 183 of 280

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	Urgent iridotomy
	IV acetazolamide
	Topical latanoprost
	Topical brimonidine

Dashboard

Overall score: 0%

1 -

□ Question 184 of 280



A 32 year old man presented to the Emergency Department with a severe headache. The headache had started suddenly that evening while the patient was at home with his girlfriend watching television. The patient described his headache as an intense throbbing pain felt all across his head. The pain had started very quickly with the patient reporting a severity of 10 / 10 within 30 seconds. The pain had eased slightly following some morphine given by the ambulance crew. The patient denied any symptoms of neck stiffness or photophobia. There were no visual symptoms and no weakness in the patient's limbs or abnormal sensation.

The patient had no previous past medical history and did not normally suffer from headaches. He took no regular medications. The patient worked as a retail assistant and lived with his girlfriend. He rarely drank alcohol but did smoke cannabis on several occasions each month. The patient's girlfriend reported that the patient had smoked cannabis that evening prior to suffering his headache.

On examination, the patient was in visible discomfort due to his headache although had no meningitic signs. Glasgow Coma Score was 15/15 and the patient was afebrile. Cranial and peripheral nerve examination was unremarkable.

Further analgesia was given to the patient and investigations requested as detailed below.

CT brain: no evidence extra-dural or sub-dural bleeding; no intracerebral haemorrhage or sub-arachnoid blood; no evidence of cerebral infarction; normal ventricular system; no radiological contra-indication to lumbar puncture

Cerebrospinal fluid results:

Red cell count	1 / mm ³
White cell count	2 / mm ³
Pprotein	0.75 g / L
Glucose	60 % of serum value
Microscopy	No organisms seen
Red cell breakdown products	Negative
Opening pressure	19 cmCSF

Following initial investigation as above, the patient continued to experience severe recurrent headaches similar to that experienced at presentation and was observed to have a short, generalised seizure on the admission ward prompting further investigation.

CT angiography: diffuse arterial beading identified; results otherwise as for previous CT head

What is the cause for the patient's headache?

	Atypical migraine
	Cervical artery dissection
	Reversible cerebrovascular vasoconstriction syndrome
	Posterior reversible leucoencephalopathy syndrome
	Pituitary apoplexy

Dashboard

Overall score: 0%

1 -

Question 184 of 280

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Dashboard

Overall score: 0%

1 -

□ Question 185 of 280

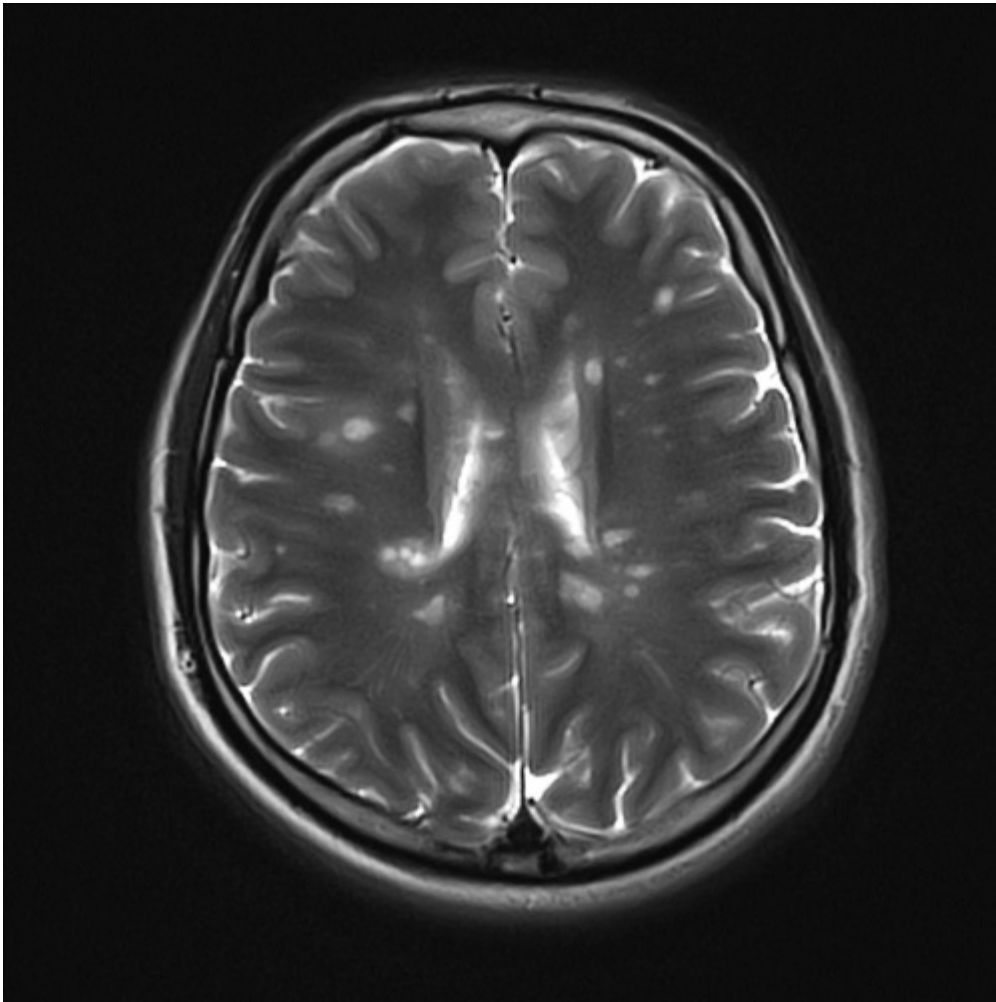
□ □

A 24-year-old man is referred to the neurology clinic by his GP. He describes a four month history of left-sided numbness and intermittent tingling. This mainly affects his left arm but he occasionally has symptoms in the left leg. There is no history of headaches, visual problems or weakness.

His GP has performed a series of blood tests including a full blood count, urea and electrolytes, vitamin B12 and C reactive protein, all of which were normal.

Neurological examination today was normal other than reduced sensation in the left C6/7 dermatome.

A MRI head is performed. The T2 images are shown below:



© Image used on license from Radiopaedia



What is the most likely diagnosis?

	Creutzfeldt-Jakob disease
	Multiple sclerosis
	Adrenoleucodystrophy
	Cerebral toxoplasmosis
	Glioblastoma multiforme

Dashboard

Overall score: 0%

1 -

□ Question 185 of 280

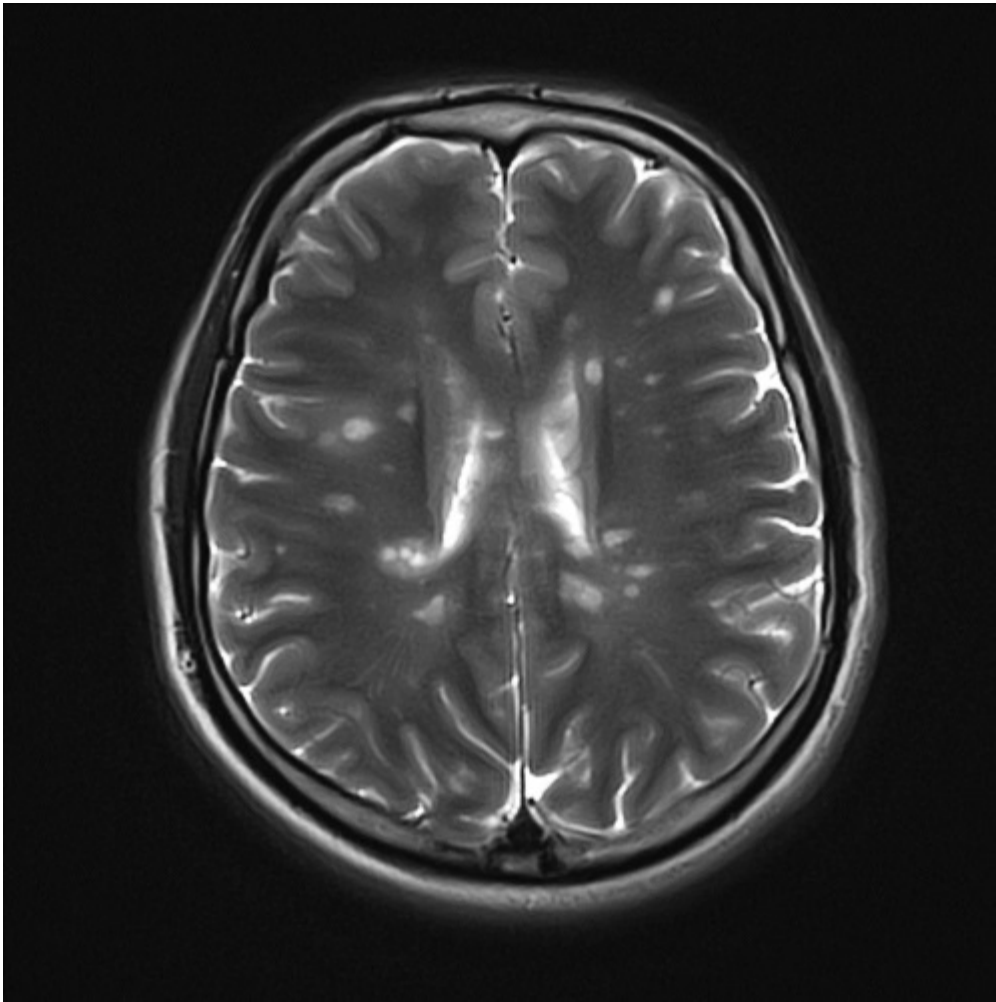
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Question 185 of 280

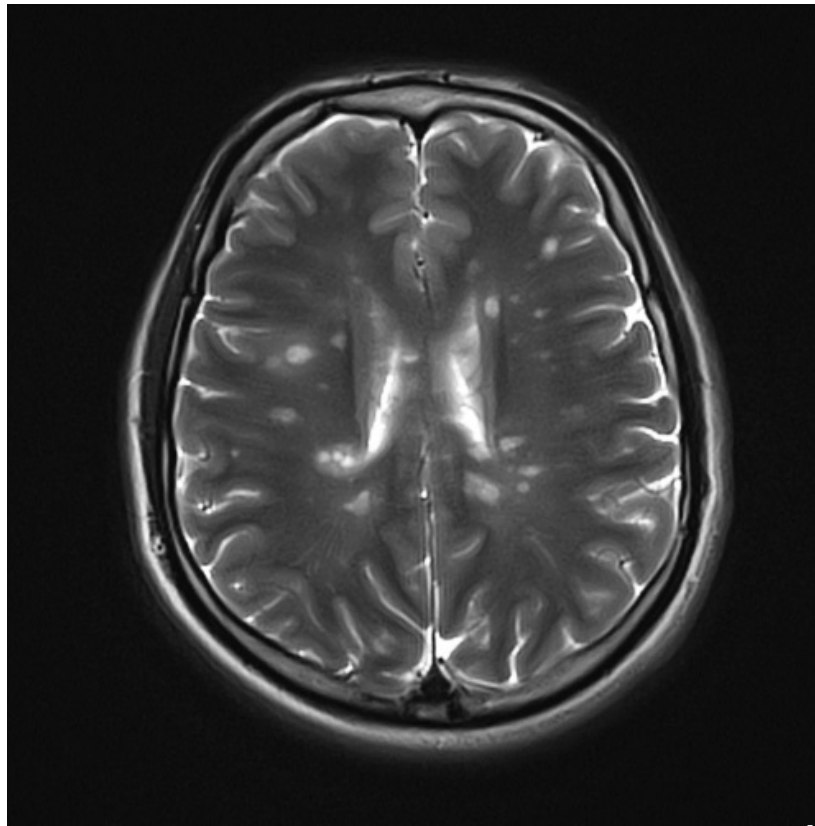
 

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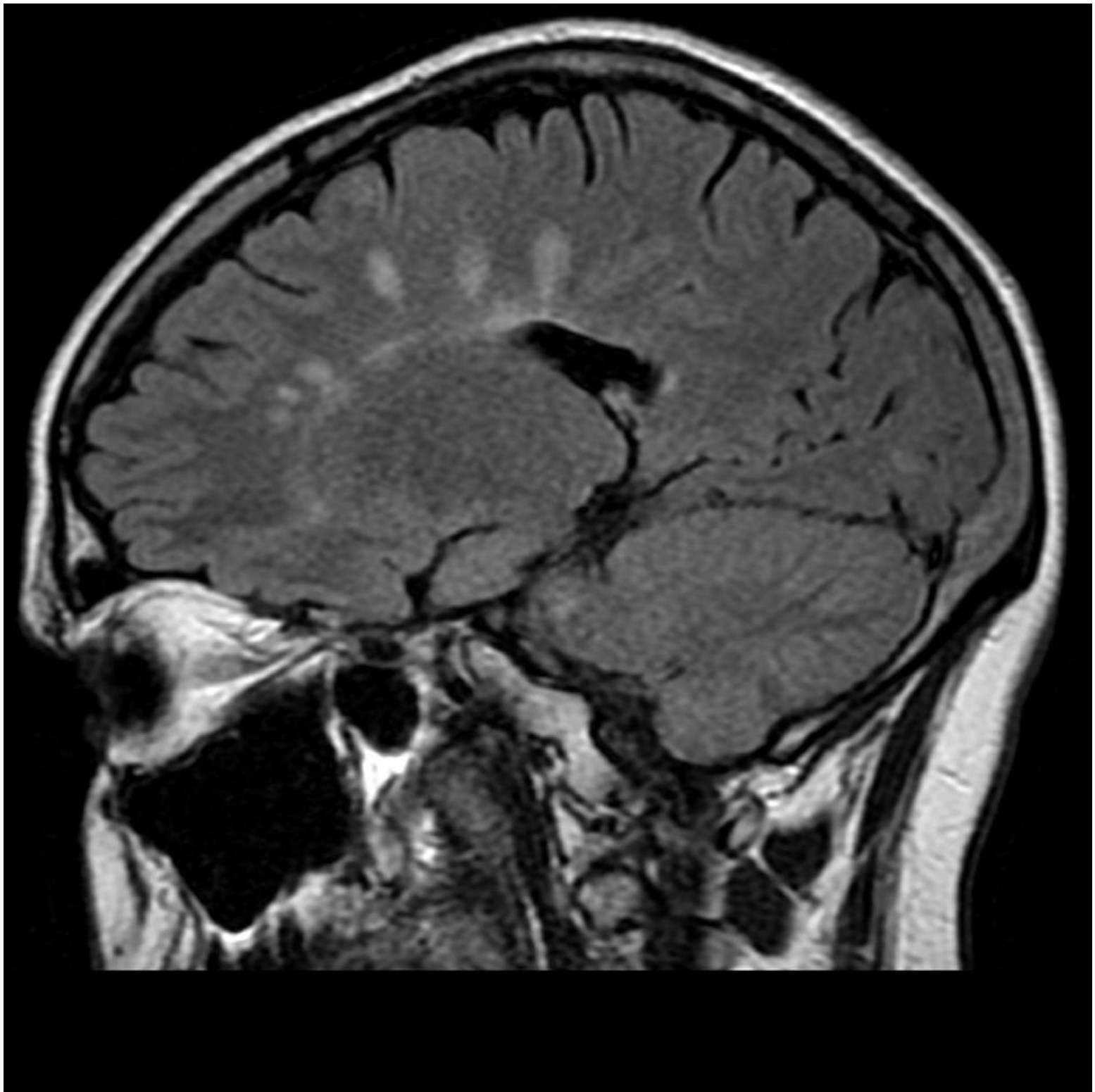
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Question 185 of 280

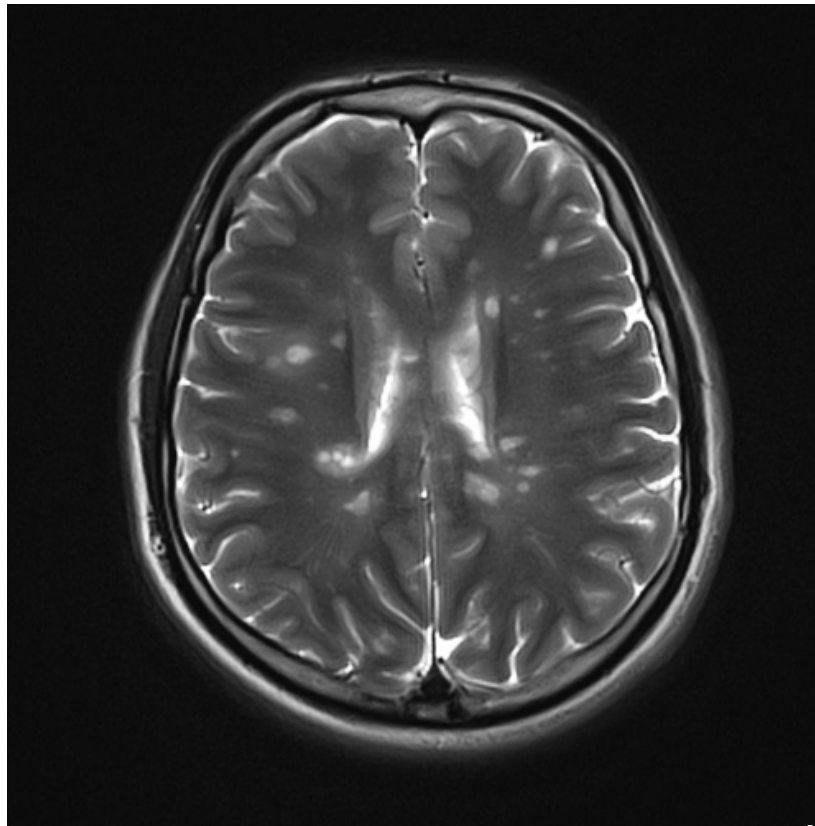
 

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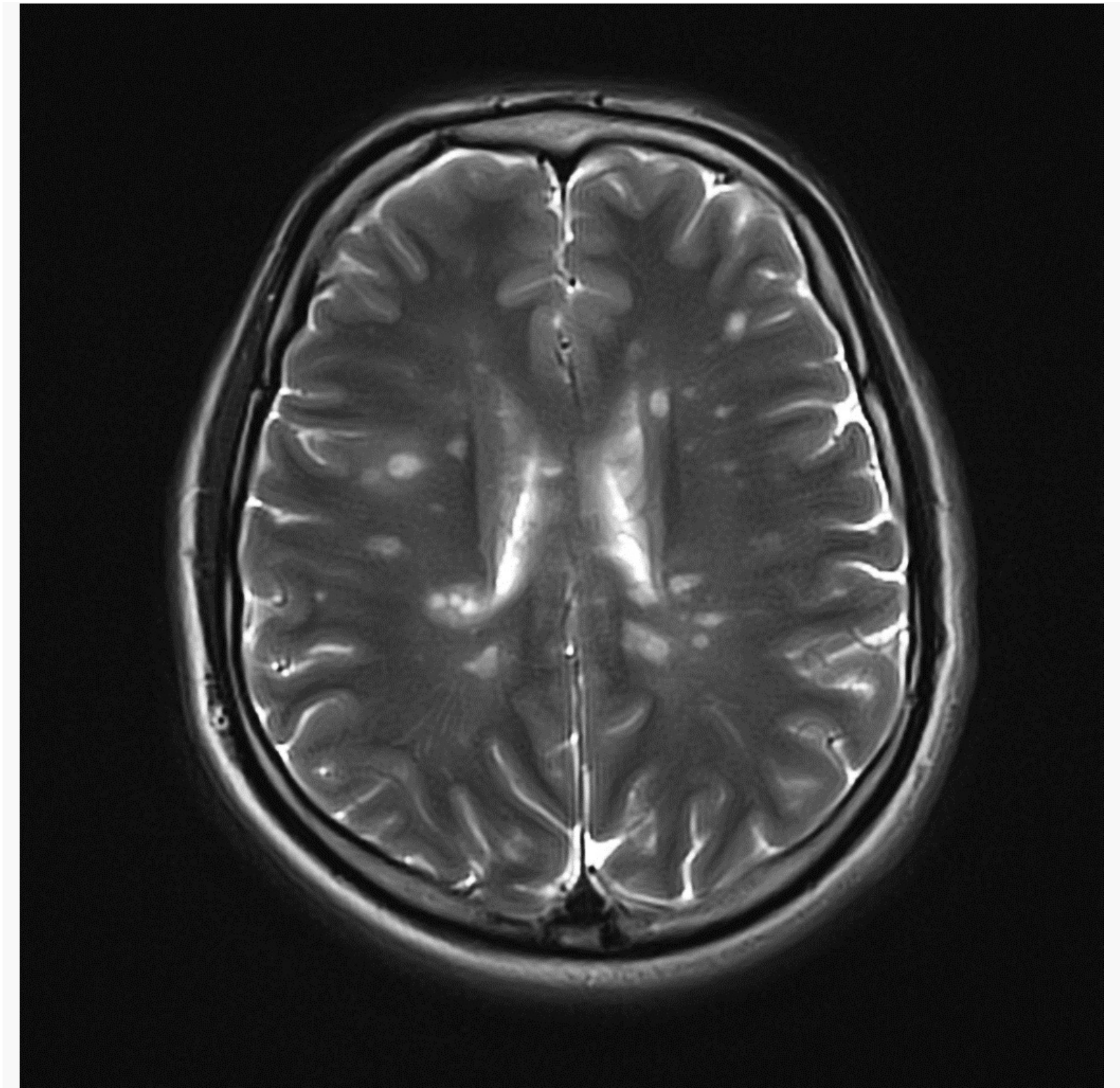
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Question 185 of 280

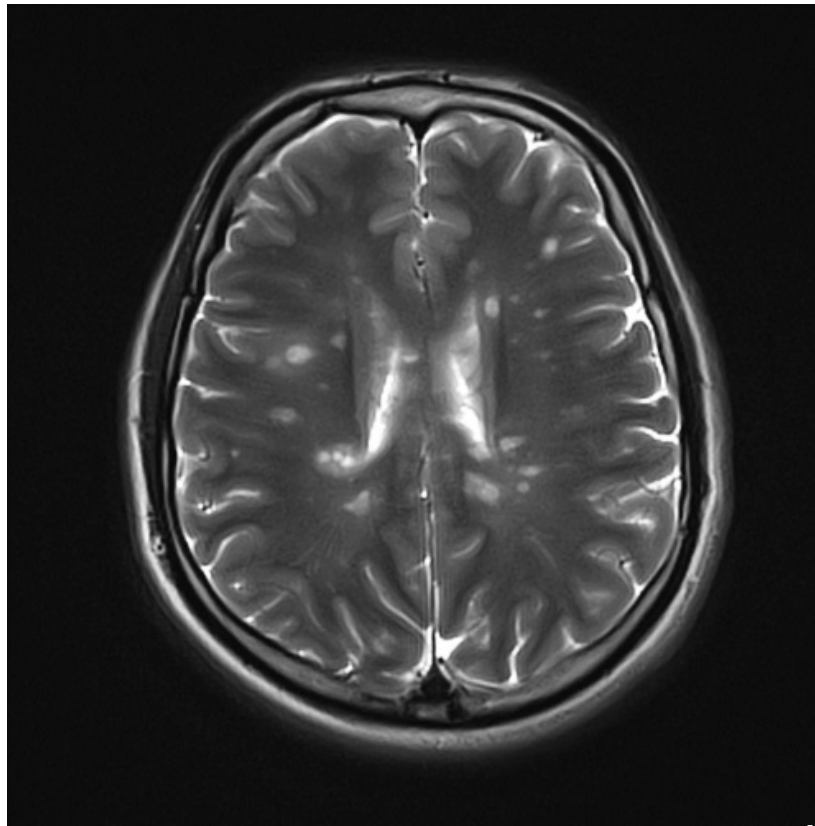
 

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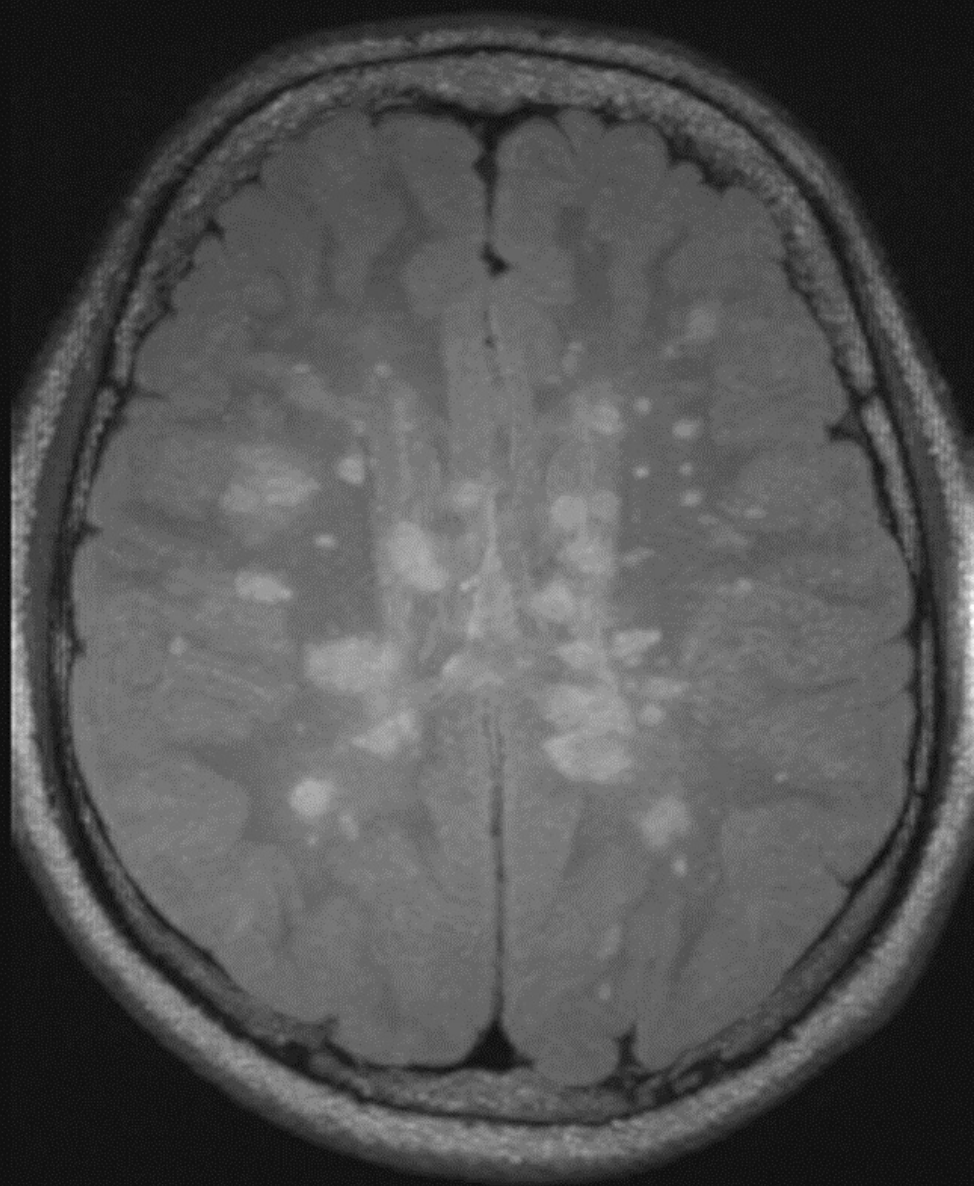
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	Multiple sclerosis
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Dashboard

Overall score: 0%

1 -



Question 186 of 280

□ □

A 35-year-old female presents to the Emergency Department with worsening lower limb weakness over a three day period. She is now unable to walk and feels that her fingers are becoming clumsy. On examination her heart rate is 65 beats per minute and regular, her blood pressure is 125/70 mmHg and her respiratory rate is 20 breaths per minute. She has absent ankle and knee jerks and reduced reflexes in the upper limbs.

Her cerebrospinal fluid (CSF) study shows an elevated protein with a normal white cell count. Given her likely diagnosis, which of the following parameters is most important to measure throughout her admission?

	Lower limb power
	Serial CSF protein levels
	Forced expiratory volume over 1st second (FEV1)
	Postural blood pressure
	Forced vital capacity (FVC)

Dashboard

Overall score: 0%

1 -

Question 186 of 280

□ □

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	Forced vital capacity (FVC)

Dashboard

Overall score: **0%**

1 -

Question 187 of 280

□ □

A 68 year old female presents via blue light ambulance to the emergency department with a first seizure, witnessed by her husband. He describes a sudden onset limb jerking lasting for around 6 minutes, associated with urinary incontinence and tongue biting, with a period of confusion and drowsiness immediately after. He is not aware of her having had any previous seizures, she has no other past medical history and does not take drugs on a medical history. He however does describe her to be 'not quite herself' over the past four weeks, when she appears to have been extremely agitated and occasionally extremely paranoid. He had thought it to be linked to her not feeling very well, during a period when she had complained of a 'flu-like' headache, generalised muscle ache and a non-productive cough.

You examine her, finding significant gait and limb ataxia with no truncal ataxia. Her blood tests are unremarkable except for positive anti-NMDA antibodies. Her MRI scan demonstrates swelling in bilateral limbic cortices and other no other intracranial abnormalities. She has declined a lumbar puncture and is thought to retain capacity.

Which investigation would most likely provide the underlying diagnosis?

	CT abdomen/pelvis with contrast
	Lumbar puncture
	Nerve conduction studies and EMG
	MRI spine
	Muscle biopsy

Dashboard

Overall score: 0%

1 -

Question 187 of 280

□ □

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	Muscle biopsy

Dashboard

Overall score: **0%**

1 -

Question 188 of 280

□ □

A house officer is asked to review a patient on her ward as the nurses are concerned about the patient's speech. The house officer reports that the patient has unilateral weakness of her right face, arm and leg, dysphasia and a visual field defect. She reports that reflexes are brisk on the right and that the tone of the limbs is increased. There is no disdiadokokinesis on the left, but she is unable to assess on the right arm. The patient's heart rate is 65, blood pressure 198/100 mmHg and respiratory rate 14. Jugular venous pressure is 2cm above the sternal notch. Pupils react to light and are consensual. The patient's family are present who report that the symptoms were sudden in onset. The family are unsure about past medical history, but a list of medications includes warfarin, bendroflumethiazide, ramipril, atorvastatin and allopurinol. A CT head reveals a cerebral infarct.

How would this stroke be classified?

<input type="checkbox"/>	Partial anterior circulation stroke
<input type="checkbox"/>	Total anterior circulation stroke
<input type="checkbox"/>	Posterior circulation stroke
<input type="checkbox"/>	Lacunar syndrome
<input type="checkbox"/>	Thalamic stroke

Dashboard

Overall score: 0%

1 -

Question 188 of 280

□ □

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How would this stroke be classified?

<input type="radio"/>	Partial anterior circulation stroke
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<input type="radio"/>	Lacunar syndrome
<input type="radio"/>	Thalamic stroke

Dashboard

Overall score: **0%**

1 -

□ Question 189 of 280

□ □

A 29 year old man presents to the stroke ward following a right sided middle cerebral artery territory infarct. You are reviewing him 4 weeks after as an outpatient. Whilst taking a history from him and his father you find out that he had a normal delivery and early development and initially performed well in school. However from about the age of 12 he started developing complex partial seizures with secondary generalisation that were difficult to control with medications and started to struggle in school.

Since adulthood, he has suffered from frequent migraines that have again been difficult to treat with medications. He also suffers from recurrent vomiting although a thorough gastroenterological assessment including OGD with biopsies could not find any cause for the vomiting.

When aged 26 whilst out walking, he suddenly became very dizzy and unable to walk properly. These symptoms resolved in a day and he never sought medical attention. Since that incident he has been left with a tremor that now makes his work as a painter almost impossible to do. He has also noticed that he is becoming more fatigued by walking. He goes to the gym regularly and is able to lift less and less weights as time has progressed. His mother died suddenly aged 37

Medications included: carbamazepine, clopidogrel and atorvastatin.

Examination

- Height 4ft 11inches (150 cm)
- Generalised muscle weakness with some atrophy
- Left upper limb power 3/5 right upper limb power 5/5
- Right upper limb power 5/5 left upper limb power 5/5
- Lateral nystagmus 5 beats
- Dysdiadochokinesia
- Moderate intention tremor
- MMSE 25/30

Hb	14.7 g/dl
Platelets	256 * 10 ⁹ /l
WBC	8.6 * 10 ⁹ /l

Na ⁺	140 mmol/l
K ⁺	4.5 mmol/l
Urea	4.6 mmol/l
Creatinine	54 µmol/l

Bilirubin	6 µmol/l
ALP	89 u/l
ALT	21 u/l
Total cholesterol	5.7 mmol/l
Albumin	40 g/l

CT Brain : right sided MCA territory infarct. Generalised atrophy

ABGs on air

pH	7.38
CO2	3.7 kPa
O2	15.6 kPa
Bicarb	49 mmol/l
Lactate	8.4 mmol/l

What is the most likely diagnosis?

	Familial hypercholesterolaemia
	MELAS syndrome
	Carbamazepine poisoning
	CADASIL
	Pyruvate carboxylase deficiency

Dashboard

Overall score: 0%

1 -

□ Question 189 of 280

□ □

A 29 year old man presents to the stroke ward following a right sided middle cerebral artery territory infarct. You are reviewing him 4 weeks after as an outpatient. Whilst taking a history from him and his father you find out that he had a normal delivery and early development and initially performed well in school. However from about the age of 12 he started developing complex partial seizures with secondary generalisation that were difficult to control with medications and started to struggle in school.

Since adulthood, he has suffered from frequent migraines that have again been difficult to treat with medications. He also suffers from recurrent vomiting although a thorough gastroenterological assessment including OGD with biopsies could not find any cause for the vomiting.

When aged 26 whilst out walking, he suddenly became very dizzy and unable to walk properly. These symptoms resolved in a day and he never sought medical attention. Since that incident he has been left with a tremor that now makes his work as a painter almost impossible to do. He has also noticed that he is becoming more fatigued by walking. He goes to the gym regularly and is able to lift less and less weights as time has progressed. His mother died suddenly aged 37

Medications included: carbamazepine, clopidogrel and atorvastatin.

Examination

- Height 4ft 11inches (150 cm)
- Generalised muscle weakness with some atrophy
- Left upper limb power 3/5 right upper limb power 5/5
- Right upper limb power 5/5 left upper limb power 5/5
- Lateral nystagmus 5 beats
- Dysidiadochokinesia
- Moderate intention tremor
- MMSE 25/30

Hb	14.7 g/dl
Platelets	256 * 10 ⁹ /l
WBC	8.6 * 10 ⁹ /l

Na ⁺	140 mmol/l
K ⁺	4.5 mmol/l
Urea	4.6 mmol/l
Creatinine	54 µmol/l

Bilirubin	6 µmol/l
ALP	89 u/l
ALT	21 u/l
Total cholesterol	5.7 mmol/l
Albumin	40 g/l

CT Brain : right sided MCA territory infarct. Generalised atrophy

ABGs on air

pH	7.38
CO2	3.7 kPa
O2	15.6 kPa
Bicarb	49 mmol/l
Lactate	8.4 mmol/l

What is the most likely diagnosis?

	Familial hypercholesterolaemia
	MELAS syndrome
	Carbamazepine poisoning
	CADASIL
	Pyruvate carboxylase deficiency

Dashboard

Overall score: **0%**

1 -

Question 190 of 280

□ □

A 23-year-old university student presented with a year long history of occipital headache. This was worse on coughing, sneezing and straining and partially relieved by lying flat. On one occasion the headache had been associated with vomiting. She had previously consulted her family doctor who was treating her for migraine. Over the past two months she had noticed pain in her both arms and felt unsteady on her feet.

On examination touching her arms caused pain and there was reduced appreciation of pinprick and temperature sensation throughout both arms. Tone, power and reflexes in the upper limbs were normal. On testing upper limb co-ordination there was some past-pointing and a very mild intention tremor. On inspection of the feet there was pes cavus and Rombergs test was positive. Again tone, power and reflexes were normal in the lower limbs and plantars were downgoing. Proprioception was impaired with absent joint position sense until the level of the knee. Vibration sensation was impaired in both feet.

Given the clinical findings outlined above which of the following is the most likely diagnosis?

	Syringomyelia
	Friedrichs ataxia
	Brown-Sequard syndrome
	Charcot-Marie-Tooth disease
	Multiple sclerosis

Dashboard

Overall score: 0%

1 -

Question 190 of 280

□ □

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Dashboard

Overall score: **0%**

1 -

Question 191 of 280

□ □

A 29-year-old man has developed a gradual onset of bilateral leg weakness over the last 24 months such that he now needs to walk with crutches. He is also intermittently incontinent of urine. He will also often fall over in the dark because he feels his balance is worse then. He has never noticed any other symptoms prior to these. He has no significant past medical conditions. He works as an accountant. He went travelling for some years in his early 20's to the Carribean, Japan and Africa. He admits occasional intravenous drug use whilst travelling and getting a tattoo. He also has casual sexual contact with sex workers occasionally whilst travelling and does not recall using barrier contraception. On examination, you find hyperreflexia bilaterally in the legs with upgoing plantar responses. He has loss of vibration and joint position sense in the legs. Legs are 3/5 power in the knee and plantar extensors and 4/5 in the flexors. He has a stomping gait. Routine blood tests plus HIV screening come back unremarkable. MRI brain and whole spine show areas of demyelination in the lumbar spine. Which test would you do to confirm the most likely suspected cause of his symptoms?

	Serm JC virus levels
	Serum and CSF HTLV-1 antibody levels
	Syphilis serology
	Hepatitis B serology
	Paired serum and cerebrospinal fluid (CSF) oligoclonal band levels

Dashboard

Overall score: 0%

1 -

Question 191 of 280

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Dashboard

Overall score: **0%**

1 -

□ Question 192 of 280

□ □

An 86-year-old lady was admitted to the acute medical admissions unit having been referred by her GP with acute confusion. Three days ago she was treated by her GP with trimethoprim 200mg BD for a presumed urinary tract infection, her nursing home having complained of new urinary incontinence and offensive smelling urine. Unfortunately, she continued to deteriorate and on the day of admission had become rather confused and unable to mobilise, leading to the admission. Her past medical history comprised Alzheimer's disease, hypertension, hypercholesterolaemia and osteoarthritis for which she was prescribed donepezil 10mg OD, amlodipine 5mg OD, atorvastatin 20mg ON and paracetamol 1g QDS. She was usually able to mobilise independently and suffered from intermittent confusion, though she was able to hold lucid conversations with her care workers. She had a daughter who resided abroad who had not made contact with her in several years and did not have a lasting power of attorney or advanced directive in place.

Examination revealed a very unwell elderly lady. Her temperature was 39.6°C, heart rate 122 bpm, respiratory rate 26/min and blood pressure of 97/58 mmHg. Examination of her cardiovascular system revealed the presence of a bounding peripheral pulse and a capillary refill time of three seconds. Examination of her respiratory system revealed tachypnoea. Examination of her abdomen revealed no abnormalities. She was not compliant with formal neurological examination; her GCS was 14 (E4 S4 M6). She was very confused and unable to maintain a formal conversation; her speech did not resemble any form.

When the doctor proceeded to perform venous cannulation, she became very aggressive and hostile. She refused all forms of treatment, stating that she did not require medical treatment and requested to leave the ward immediately. She did not appear to comprehend the risks of refusing medical admission and was unable to recall the information disseminated.

What is the next best management option?

	Seek opinion from family members
	Apply for formal Deprivation of Liberty Order and proceed with treatment once obtained
	Respect the wishes of the patient and arrange for urgent GP follow up
	Section under 5(2) of the Mental Health Act (MHA) and proceed with treatment
	Proceed with treatment under the Mental Capacity Act (MCA)

Dashboard

Overall score: **0%**

1 -

□ Question 192 of 280

□ □

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Dashboard

Overall score: **0%**

1 -

Question 193 of 280

□ □

A 58-year-old female with known myasthenia gravis complains of increasing tiredness and reducing exercise tolerance over the past 3 days. During your examination, she has a weak voice is unable to finish her sentences and appears slightly slumped in the chair she is sitting in. What is the most important investigation at this acute stage?

	Forced vital capacity (FVC)
	12 lead ECG
	Forced expiratory volume in 1 second (FEV1)
	Blood tests including full blood count, U+Es, LFTs, CRP
	Chest x-ray

Dashboard

Overall score: 0%

1 -

Question 193 of 280

□ □

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Dashboard

Overall score: **0%**

1 -

Question 194 of 280

□ □

A 46 year old female presents with her third episode of diplopia in two years. During the first episode 3 years ago, her medical notes record that she was unable to abduct her left eye and had a left partial ptosis, which in subsequent clinic follow-up was found to have been resolved after 4 weeks. Her second episode occurred 6 months ago, during which she experienced mild vertical diplopia, diagnosed by GP as a fourth nerve palsy secondary to diabetic microvascular disease, which improved to normal after 6 weeks.

Her past medical history includes insulin dependent diabetes, with moderate control HbA1c (IFCC 39 mmol/mol), autoimmune hypothyroidism and vitiligo. She is a non-smoker. On examination today, you note a failure of vertical upgaze in her right eye and 50% failure of adduction with a 50% partial ptosis. Both pupils were equal and reactive.

Her admission blood tests were unremarkable. A MRI head and orbits demonstrated no orbital or intracranial pathology. Which of the following history is most likely to produce the underlying diagnosis?

	Single fibre EMG
	Lumbar puncture including oligoclonal bands
	Neurogenetics
	CT chest/abdomen/pelvis
	ANA, ANCA, complement autoimmune screen

Dashboard

Overall score: 0%

1 -

□ Question 194 of 280

□ □

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	ANA, ANCA, complement autoimmune screen

Dashboard

Overall score: **0%**

1 -

□ Question 195 of 280



A 52-year-old man is admitted to the stroke unit with a right total anterior circulation syndrome (TACS) infarct. He arrived at hospital 2.5 hours after the onset of his symptoms and was treated with intravenous alteplase at 3 hours post-onset.

He is known have an atrial septal defect which was discovered after a murmur was heard at a routine insurance medical several years ago. He works in the oil business and has recently returned from a business trip to Saudi Arabia.

On examination the following day there subtle signs of improvement with increased movement in his left hand. However, the rest of his arm remains flaccid and he has persisting dense hemiplegia affecting his right leg. He has a notable homonymous hemianopia on examination. A routine CT Brain 24-hours post-thrombolysis revealed established ischaemic changes in the MCA territory with new petechial haemorrhage along the border of the infarct.

Later that evening, his conscious level falls. His Glasgow Coma Scale changes from E4 M6 V2, to E2, M4 V2. His blood pressure is 187/112 mmHg.

Urgent bloods reveal:

Haemoglobin	120 g/l
Prothrombin time	27 seconds
Activated partial thromboplastin time (APTT)	49 seconds

What intervention is likely to have the most benefit?

	Correction of coagulopathy
	Decompressive craniotomy
	Control of blood pressure
	Protamine sulphate
	Tranexamic acid

Dashboard

Overall score: **0%**

1 -

□ Question 195 of 280



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Dashboard

Overall score: **0%**

1 -

Question 196 of 280

□ □

You are asked for advice from a GP regarding a 52 year old woman with a diagnosis of Generalised Anxiety Disorder. She is having symptoms of free floating anxiety for the past 5 years and this is causing work and relationship difficulties. The GP tells you that 5 years ago he was admitted to hospital with epigastric pain and anaemia and required a therapeutic endoscopy. A repeat endoscopy showed a small ulcer at D2 with a small amount of ooze which was treated with adrenaline. She still suffers from occasional heartburn.

She also has a history of alcohol dependency. She drank 20 units of alcohol per day for 20 years but has now cut down to 1-2 units per day. An ultrasound scan of the abdomen showed mild portal hypertension, hepatomegaly and no gastric varices. There is no history of deliberate self harm or overdoses. She takes Vitamin B Co strong and thiamine 100mg PO OD and omeprazole 20mg PO OD and is compliant with medication currently but has a history of non compliance with medication.

Which would be the safest therapy for treatment of his generalised anxiety disorder?

	Clonazepam
	Diazepam
	Sertraline
	Citalopram
	Imipramine

Dashboard

Overall score: 0%

1 -

Question 196 of 280

□ □

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Dashboard

Overall score: **0%**

1 -

□ Question 197 of 280



A 25 year old Caucasian male presents with his first ever episode of witnessed generalised seizure, with witnessed jerking of his right arm and leg, lasting for 4 minutes terminated by benzodiazepines administered by paramedics. There is no other past medical history and documentation of head injuries. His past medical history includes recurrent epistaxes since childhood and current treatment for a left calf deep vein thrombosis, provoked following two recent long-haul flights from Australia. A thrombophilia screen has subsequently been negative. Family history is unavailable.

On examination, the patient is confused post-ictally and is uncooperative with examination. You note that his pupils are equal and reactive, he is moving all 4 limbs with no obvious focal neurology. There appears to be no visual or sensory neglect. A urinary toxscreen is negative.

His blood tests and arterial blood gas are as follows:

Hb	17.5 g/dl
MCV	87 fl
Platelets	$223 \times 10^9/l$
WBC	$9.2 \times 10^9/l$
Urea	6.6 mmol/l
Creatinine	64 $\mu\text{mol/l}$
CRP	24 mg/l

pH	7.32
PaO ₂	9.1 kPa
PaCO ₂	4.2 kPa
Lactate	4.2 mmol/l
Bicarbonate	16 mmol/l

With sedation, the patient undergoes a CT head, which demonstrates an arterio-venous fistula in his right parietal lobe.

The patient remains an inpatient while discussed for management with neurosurgeons and returns to baseline with no focal neurological deficits. At 48 hours after admission, he develops sudden onset left face, arm and leg weakness and loss of sensation, with flaccid tone, downgoing plantars. A repeat CT head confirms a right middle cerebral artery ischaemic stroke.

What is the unifying diagnosis?

	Malignancy of unclear primary
	Haemorrhagic hereditary telangectasia
	Saddle pulmonary embolus
	Polycythaemia rubra vera
	Paroxysmal nocturnal haemoglobinuria

Dashboard

Overall score: 0%

1 -

□ Question 197 of 280



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Dashboard

Overall score: **0%**

1 -

Question 198 of 280

□ □

A 42-year-old female presented with a 6-month history of weakness affecting her upper limbs. She found that this was worse at the end of the day, particularly if she had been doing a lot of lifting. She also reported occasional difficulty in swallowing at the end of the day, with drinks causing her to cough. She had been prescribed pyridostigmine, but she stopped taking this as she had not noticed any benefit.

On examination, there was a mild partial ptosis, and a slight facial droop bilaterally. Extra-ocular movements were normal. Power in shoulder abduction was grade 4/5 bilaterally, but was reduced to 3/5 after repeatedly abducting and adducting the shoulder 20 times. Tone and sensation were normal.

Initial investigation results are shown below:

Nerve conduction studies: Decremental response to repetitive nerve stimulation

Single-fibre electromyography: Increased jitter

Anti-Jo antibodies: Negative

Anti-Mi2 antibodies: Negative

Anti-acetylcholine receptor antibodies: Negative

Which of the following immunological tests is most likely to contribute to the diagnosis?

	Anti-muscle-specific tyrosine kinase(MuSK) antibodies
	Anti-N-methyl D-aspartate (NMDA) receptor antibodies
	Anti-glutamic acid decarboxylase (GAD) antibodies
	Anti-acetylcholine receptor antibody
	Anti-Hu antibodies

Overall score: **0%**

1 -

Question 198 of 280

□ □

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	Anti-acetylcholine receptor antibody
	Anti-Hu antibodies

Overall score: **0%**

1 -

Question 199 of 280

□ □

A 19-year-old university student is reviewed in the general medical clinic with bilateral ptosis. It has developed gradually over the last few months and has now progressed to the extent that he has to tilt his head upwards during lectures. He denies diurnal variation in his symptoms.

His past medical history is unremarkable and he takes no regular medications. He tells you that his mother had a pacemaker fitted due to frequent 'blackouts'.

On examination, you note the presence of bilateral ptosis. He also has impaired abduction and adduction of both eyes. Direct fundoscopy shows black spicules in the periphery of both eyes. An ECG is taken and shows sinus rhythm with first-degree heart block.

Given the likely diagnosis, which additional symptom is he most likely to describe?

	Night blindness
	Syncope
	Tremor
	Flank pain
	Diplopia

Dashboard

Overall score: 0%

1 -

Question 199 of 280

□ □

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□ Question 199 of 280

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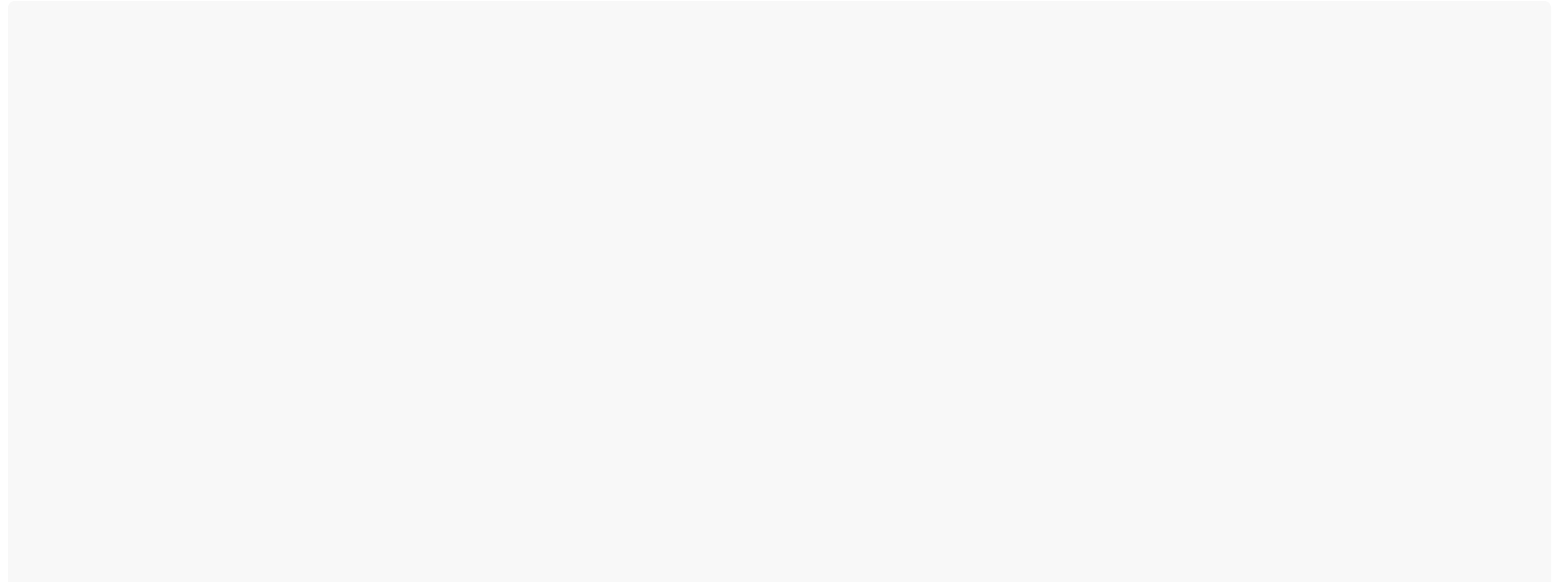
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	Diplopia

Dashboard

Overall score: 0%

1 -





□ Question 200 of 280

□ □

A 24-year-old woman is referred urgently to neurology for lower limb weakness. This has been getting gradually worse over the past 4 weeks and she is now experiencing problems walking.

She also complains of bilateral tinnitus which has been present for the past 3 months. This is associated with episodes of vertigo.

On examination both lower limbs have reduced power (3/5), with increased tone and hyperreflexia. The patient has one 1cm tan lesion on his torso but no other skin lesions are noted.

A MRI of his spine is requested:



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What is the most likely diagnosis?

	Multiple sclerosis
	Neurofibromatosis
	Von Hippel-Lindau disease
	Tuberous sclerosis
	Ataxia telangiectasia

Dashboard

Overall score: 0%

1 -

□ Question 200 of 280

□ □

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Dashboard

Overall score: **0%**

1 -

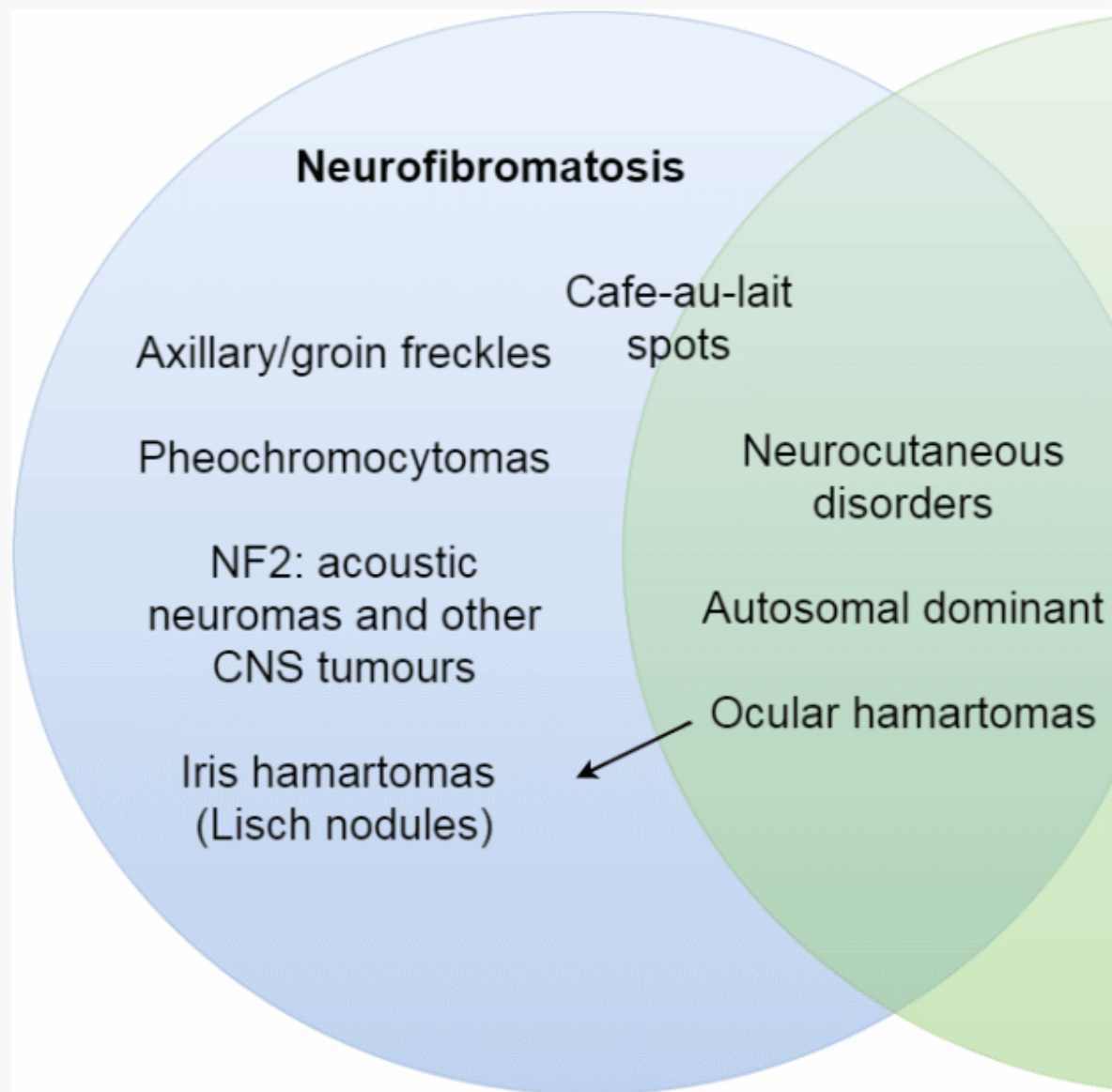
Question 200 of 280

A 24-year-old woman is referred to you over the past 4 weeks and she has noticed a 1cm tan lesion on her torso.

She also complains of bilateral hearing loss and episodes of vertigo.

On examination both lower limbs are normal. There is a 1cm tan lesion on her torso.

A MRI of her spine is requested.





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What is the most likely diagnosis?

	Multiple sclerosis
	Neurofibromatosis
	Von Hippel-Lindau disease
	Tuberous sclerosis
	Ataxia telangiectasia

Dashboard

Overall score: **0%**

1 -

Question 201 of 280

□ □

A 55-year-old obese man with a history of hypertension, diabetes and angina develops central crushing chest pain whilst gardening alone. He is short of breath and clammy. He takes two puffs of his glyceryl trinitrate spray but has only mild relief from this.

He calls an ambulance but before the ambulance arrives he suffers a cardiac arrest. The ambulance crew arrive and commence cardiopulmonary resuscitation (CPR). Heart monitoring shows him to be in ventricular tachycardia and after a DC shock and a further round of CPR, he recovers cardiac output. He is taken to the local hospital intensive care unit where he remains unconscious. The doctors explain to his family that because of the time between his cardiac arrest and CPR commencing, his brain function may not recover well.

What in patients in coma after a cardiac arrest, what is the most reliable indicator of poor prognosis at 72 hours post arrest?

	Electroencephalogram
	Glasgow coma scale motor score
	Pupillary reflex
	Somatosensory evoked potential
	Gag reflex

Dashboard

Overall score: 0%

1 -

Question 201 of 280



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	Electroencephalogram
	Glasgow coma scale motor score
	Pupillary reflex
	Somatosensory evoked potential
	Gag reflex

Dashboard

Overall score: 0%

1 -

□ Question 202 of 280



A 69-year-old retired accountant was seen in the neurology clinic having been referred by his GP. He presented with a three-month history of malaise and weakness. The weakness initially affected his legs, and at times he felt that his legs would not support him standing up. Over the course of the last month, however, he also noticed weakness in his hands, especially his left hand. This was particularly noticeable when he rode his motorbike when he felt that his fingers were not strong enough to apply the brakes. In addition, his wife remarked that his speech had changed in tone though he did not have any difficulties with understanding or expressing speech. His past medical history comprised hypertension, hypercholesterolaemia, depression and hypothyroidism. His medication regimen included amlodipine 5mg OD, atorvastatin 20mg ON, citalopram 20mg OD and levothyroxine 125mcg OD. He also remarked that he had been referred by his GP to the fast track gastroscopy clinic and was pending an appointment for new onset difficulty in swallowing food over the last month. He did not smoke and did not consume alcohol. Upon a systems review, he denied the presence of other symptoms though he did admit to losing 3kg of weight since the onset of his symptoms.

On examination, he appeared cachectic with obvious dysarthria. His blood pressure was 128/78 mmHg and his heart rate was 78bpm. Examination of his cranial nerves revealed the presence of tongue fasciculations with tremulous lips and an absent jaw jerk reflex but was otherwise unremarkable. Examination of his peripheral nervous system revealed small muscle intrinsic wasting of both hands, as well as wasting of his thigh muscles. The tone was reduced in his lower limbs but increased in his upper limbs. He had obvious weakness of all muscle groups, with a grade 4/5 weakness in his lower limbs and proximal upper limb and a grade 3/5 weakness in his distal upper limbs. Fasciculations were present in his thighs and forearms. Both upper and lower limb reflexes were brisk with downgoing plantars. Examination of sensation was normal. Examination of the cardiovascular, respiratory and gastrointestinal systems was unremarkable.

Investigations conducted by the GP prior to referral are as follows:

Hb	111 g/l
Platelets	99 * 10 ⁹ /l
WBC	12.2 * 10 ⁹ /l
ESR	18 mm/hr
CRP	6 mg/l
ANA	positive
Rheumatoid factor	negative



Which one of the following interventions is most likely to be of benefit?

	Mitoxantrone
	Riluzole
	Rivastigmine
	Methotrexate
	Azathioprine

Dashboard

Overall score: 0%

1 -

□ Question 202 of 280



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	Riluzole
	Rivastigmine
	Methotrexate
	Azathioprine

Dashboard

Overall score: 0%

1 -

Question 203 of 280

□ □

A 25-year-old female was seen in the neurology clinic with a six-year history of headaches. The headaches occur on average two to three times per week, and she described them as a one-sided pulsating headache with associated nausea and intolerance of light lasting for four-six hours before subsiding. The headaches worsened with exertion and when they occurred she would be disabled from continuing with normal daily activities, instead resorting to taking refuge in a darkened room. She denied the presence of any transient neurological deficit or facial lacrimation, and other than the associated photophobia she denied any ocular involvement. She denied the presence of weight loss or early morning headache. Her past medical history included hypothyroidism for which she was prescribed levothyroxine 125mcg OD.

Investigations conducted are as follows:

TSH	0.36 u/l
-----	----------

MRI: presence of normal intracranial appearances, no evidence of space occupying lesion, intracerebral haemorrhage or mass effect

She was trialled on propranolol 80mg M/R which reduced the frequency of the headaches, but unfortunately she did not tolerate the adverse effects. Which one of the following interventions is most appropriate to prevent the headaches from occurring?

	Amitriptyline
	Gabapentin
	Sodium valproate
	Increase dose of levothyroxine
	Topiramate

Overall score: **0%**

1 -

Question 203 of 280

□ □

A 25-year-old female was seen in the neurology clinic with a six-year history of headaches. The headaches occur on average two to three times per week, and she described them as a one-sided pulsating headache with associated nausea and intolerance of light lasting for four-six hours before subsiding. The headaches worsened with exertion and when they occurred she would be disabled from continuing with normal daily activities, instead resorting to taking refuge in a darkened room. She denied the presence of any transient neurological deficit or facial lacrimation, and other than the associated photophobia she denied any ocular involvement. She denied the presence of weight loss or early morning headache. Her past medical history included hypothyroidism for which she was prescribed levothyroxine 125mcg OD.

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	Amitriptyline
	Gabapentin
	Sodium valproate
	Increase dose of levothyroxine
	Topiramate

Overall score: **0%**

1 -

Question 204 of 280

A 54-year-old female attends her GP with sudden onset reduced vision. This is particular to the left eye. The patient has a background of type 2 diabetes mellitus and hypertension. The GP is unable to adequately see the optic fundi on fundoscopy but thinks the left side appears pale.

What is the most likely diagnosis?

<input type="checkbox"/>	Retinal vein occlusion
<input type="checkbox"/>	Hypertensive retinopathy
<input type="checkbox"/>	Giant cell arteritis
<input type="checkbox"/>	Stroke
<input type="checkbox"/>	Retinal artery occlusion

Dashboard

Overall score: **0%**

1 -

Question 204 of 280

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Dashboard

Overall score: **0%**

1 -

Question 205 of 280

□ □

A 36-year-old lady on natalizumab for relapsing-remitting multiple sclerosis develops left leg weakness. Over 3 weeks this progresses to left hemiparesis and visual impairment. She also notices poor memory and struggles to process numbers at work as an accountant. Examination reveals left-sided 4/5 power, right homonymous hemianopia, and an abbreviated mini-mental state score of 21/30. Routine blood tests are unremarkable. MRI brain shows new multiple confluent lesions in the parietooccipital and right motor white matter areas as well as the left occipital area, with no mass effect or enhancement. Which of the following tests is likely to be most helpful in establishing a diagnosis?

	Serum glucose
	HIV serology
	JC Virus serology
	Cerebral angiogram
	Full blood count (FBC)

Dashboard

Overall score: 0%

1 -

□ Question 205 of 280

□ □

A 36-year-old lady on natalizumab for relapsing-remitting multiple sclerosis develops left leg weakness. Over 3 weeks this progresses to left hemiparesis and visual impairment. She also notices poor memory and struggles to process numbers at work as an accountant. Examination reveals left-sided 4/5 power, right homonymous hemianopia, and an abbreviated mini-mental state score of 21/30. Routine blood tests are unremarkable. MRI brain shows new multiple confluent lesions in the parietooccipital and right motor white matter areas as well as the left occipital area, with no mass effect or enhancement. Which of the following tests is likely to be most helpful in establishing a diagnosis?

	Serum glucose
	HIV serology
	JC Virus serology
	Cerebral angiogram
	Full blood count (FBC)

Dashboard

Overall score: **0%****1** -

Question 206 of 280

□ □

A 24 year old female known epileptic presents via blue-light ambulance with a generalised tonic-clonic seizures in the Emergency Department. She is currently 24 weeks pregnant and her husband reports she has suffered from epilepsy since she was 5 years old. He extremely distress and is unclear which anti-epileptics she normally takes. On our arrival, the Emergency Department registrar has already administered two intravenous boluses of lorazepam 4mg. At 10 minutes since onset of limb jerking, she continues to jerk all four limbs with low amplitude, rhythmic movements with loss of urinary continence. What is the most appropriate course of action?

	Intravenous phenytoin loading
	Intravenous sodium valproate
	3rd dose of intravenous lorazepam
	Intravenous levetiracetam
	Observe and monitor

Dashboard

Overall score: 0%

1 -

□ Question 206 of 280

□ □

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Dashboard

Overall score: **0%****1** -

□ Question 207 of 280

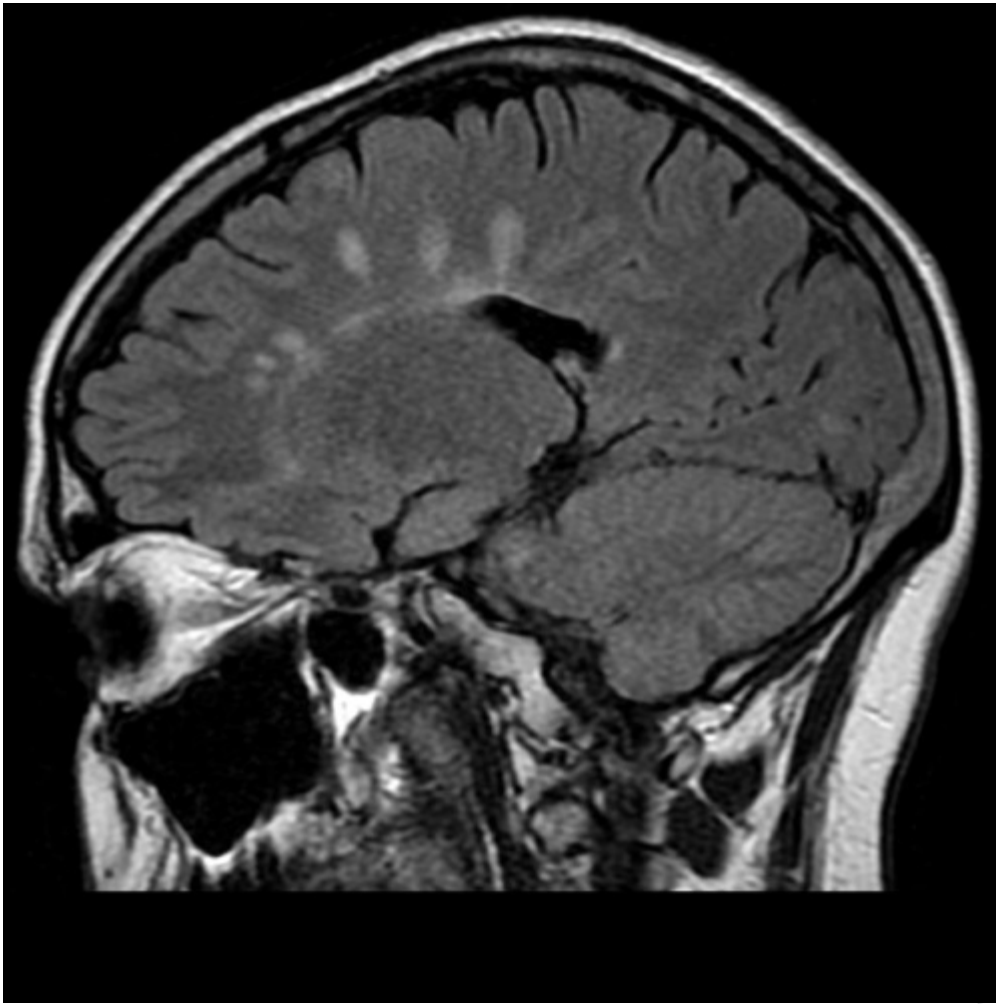
□ □

A 31-year-old woman is reviewed in the neurology clinic. For the past 6 months she has been presenting to her GP with a variety of symptoms including lethargy, heat intolerance, pins/needles and limb numbness. For the past 4 weeks she has also been complaining of shooting pains in her right hand.

Her GP has arranged a number of blood tests including thyroid function tests and vitamin B12 which were reported as normal.

A neurological examination today demonstrates no consistent neurological findings.

A MRI is requested:



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What is the most likely diagnosis?

	Multiple sclerosis
	Pituitary tumour
	Ependymoma
	Acute disseminated encephalomyelitis (ADEM)
	Systemic lupus erythematosus

Dashboard

Overall score: 0%

1 -

□ Question 207 of 280

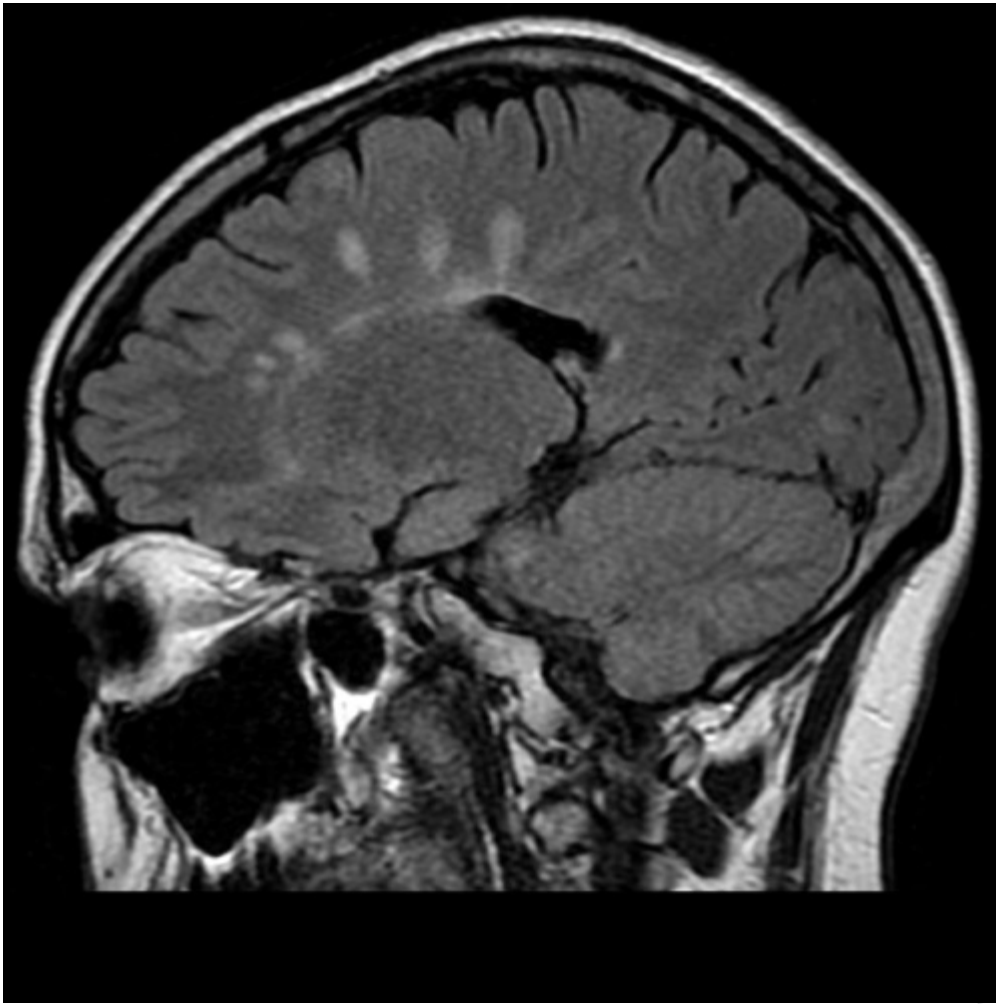
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Dashboard

Overall score: **0%**

1 -

Question 207 of 280

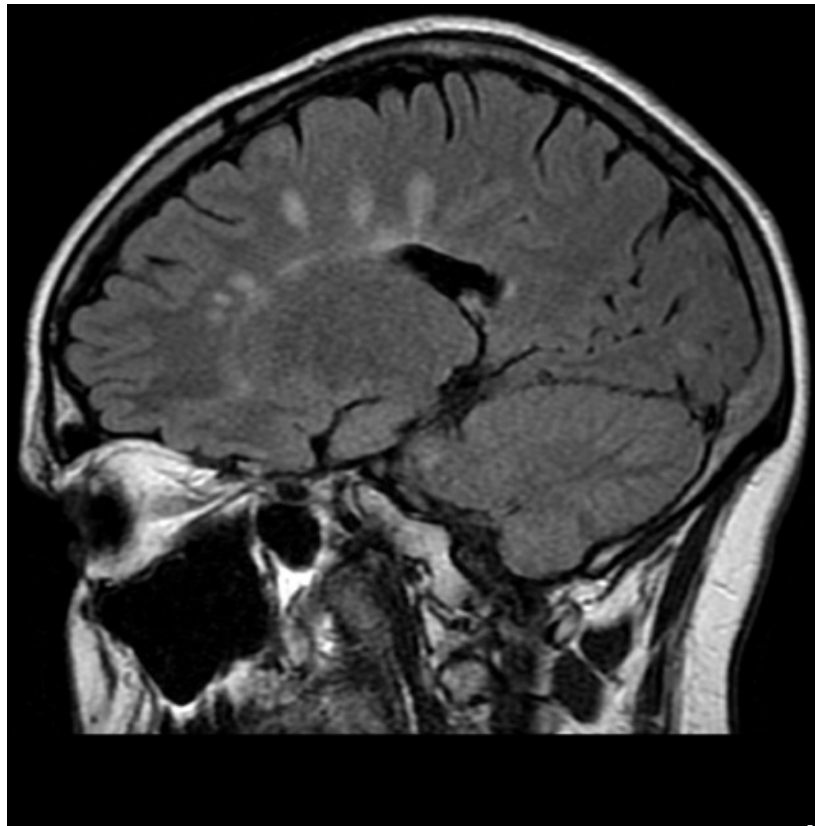
 

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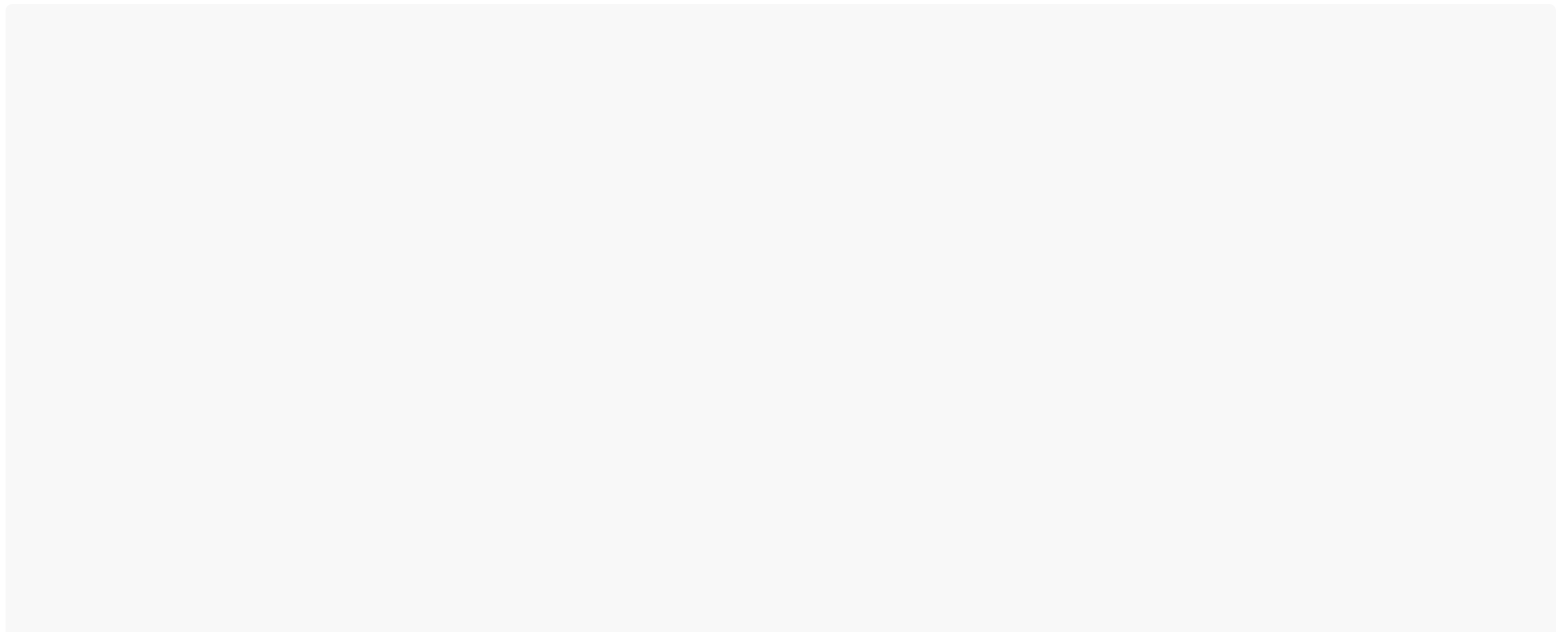
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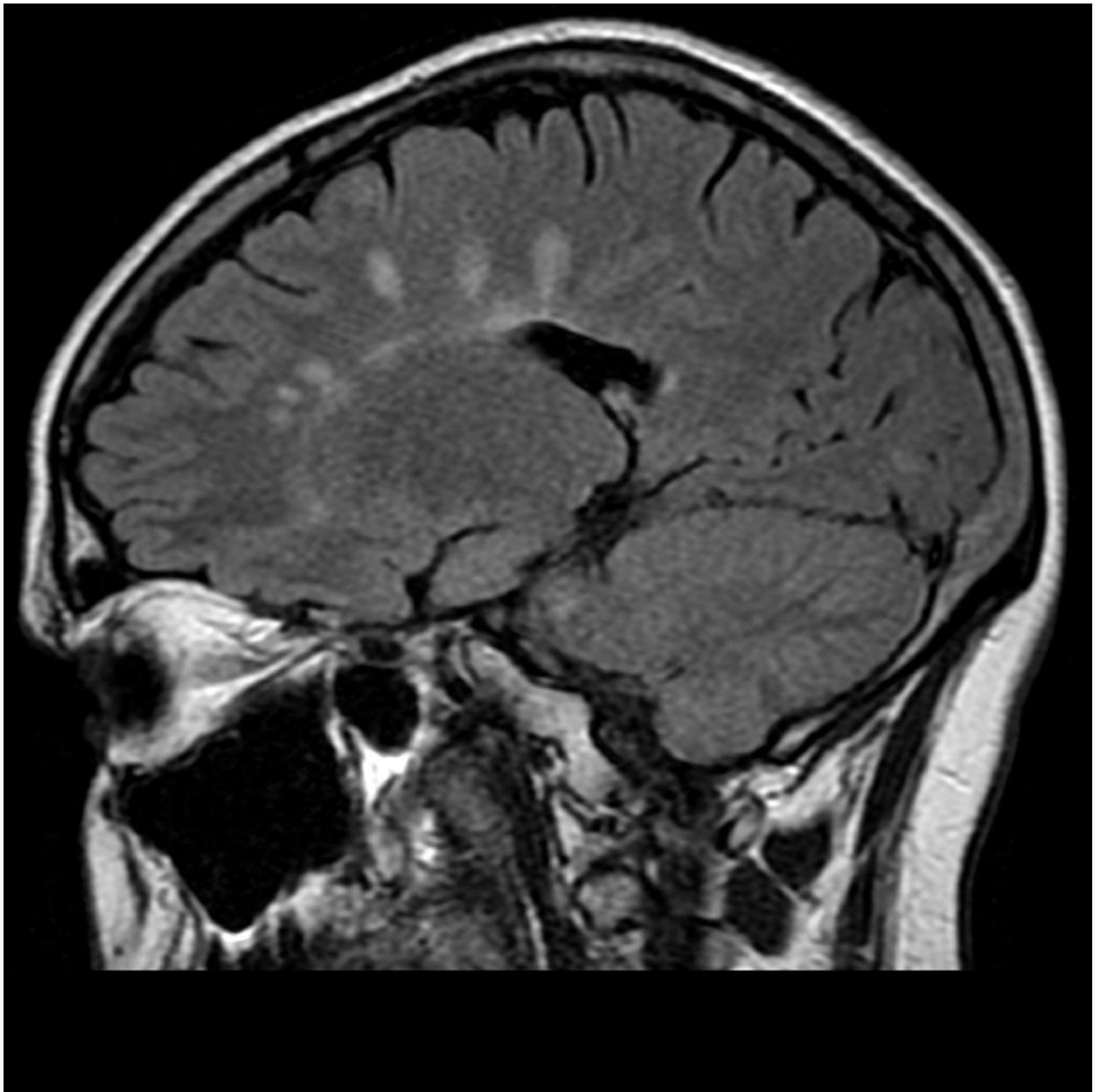
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	Pituitary tumour
	Ependymoma
	Acute disseminated encephalomyelitis (ADEM)
	Systemic lupus erythematosus

Dashboard

Overall score: 0%

1 -





□ Question 207 of 280

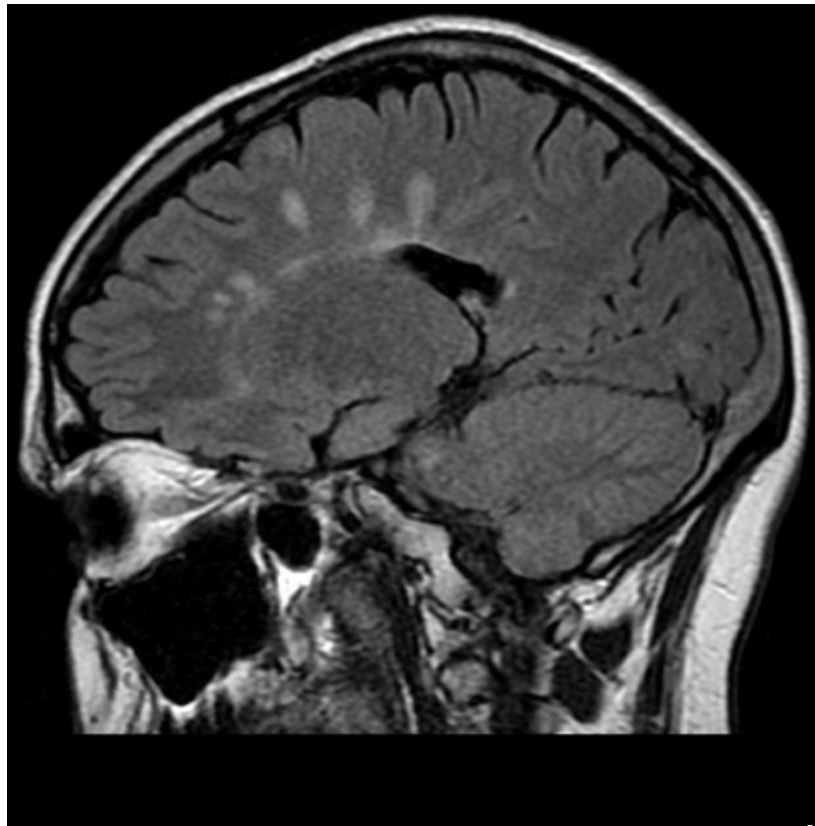
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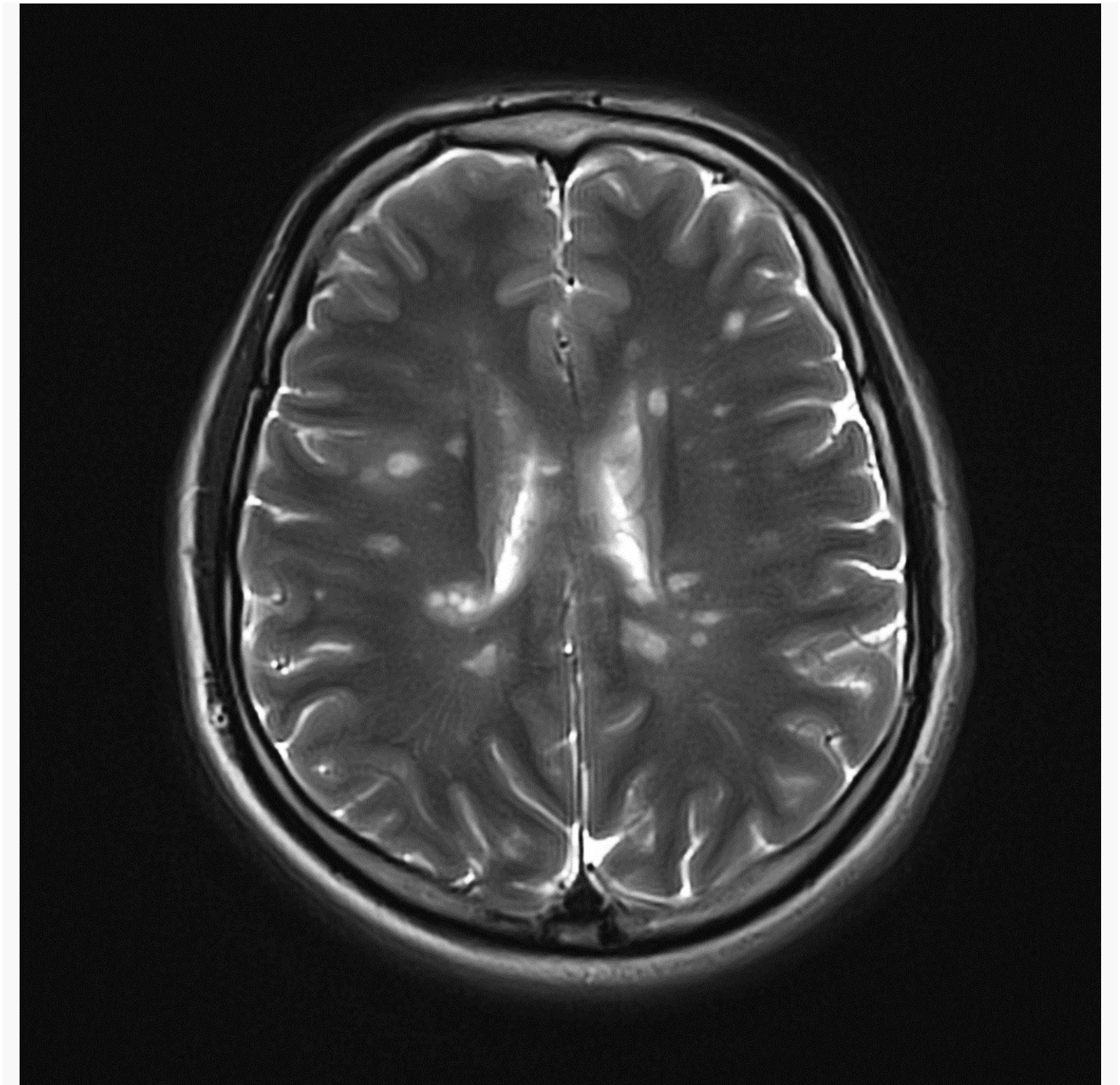
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Dashboard

Overall score: 0%

1 -



Question 207 of 280

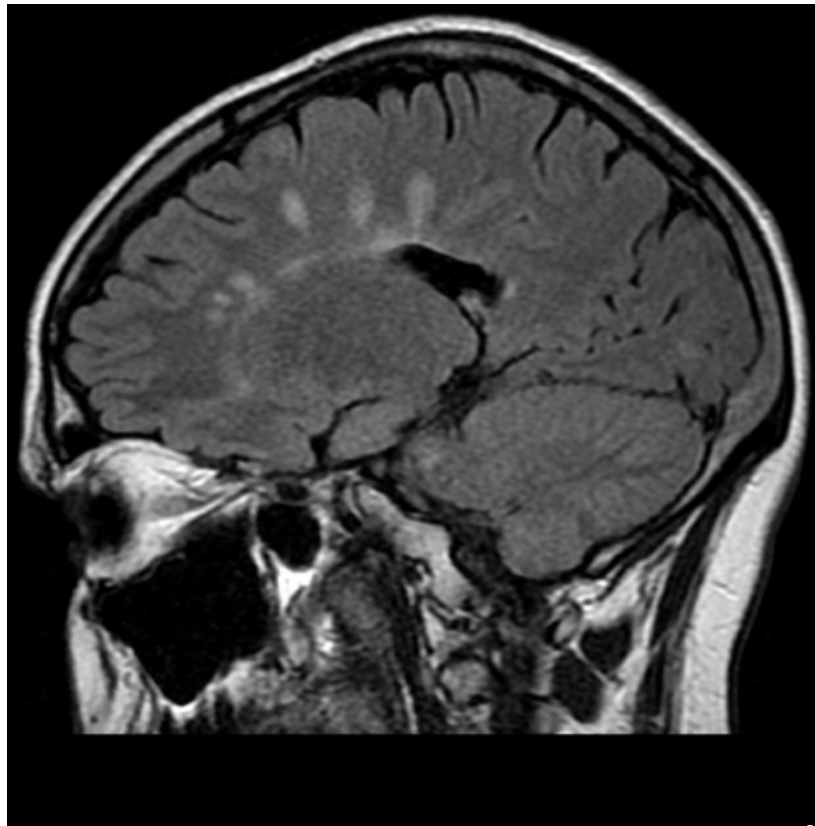
 

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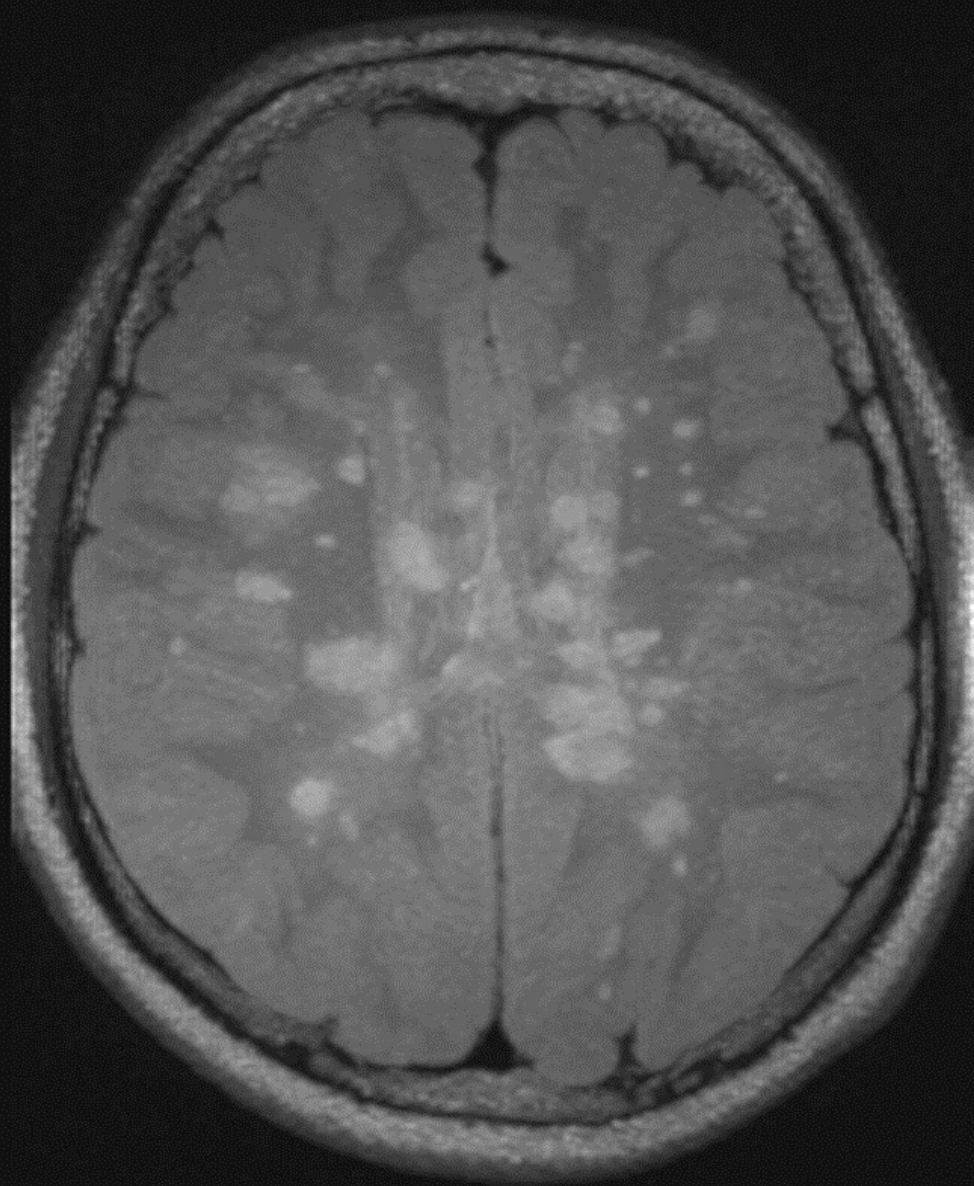
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	Pituitary tumour
	Ependymoma
	Acute disseminated encephalomyelitis (ADEM)
	Systemic lupus erythematosus

Dashboard

Overall score: 0%

1 -



Question 208 of 280

□ □

A 37-year-old woman has been diagnosed with relapsing remitting multiple sclerosis and is considering further therapeutic options including natalizumab. She has had two severe relapses despite treatment with glatiramer acetate. She is currently still able to work, but is very fatigued and feels her mobility is limited.

On examination, she has brisk reflexes bilaterally, with mild weakness in her proximal left leg and reduced sensation in the left foot.

She has highly active disease on her brain MRI with multiple acute and sub-acute plaques present. She also has a single lower cervical cord lesion.

Before considering a new therapy, aside from HIV and general immunological status, which of the following investigation results is of greatest importance?

	Cytomegalovirus status
	Syphilis serology
	Hepatitis C serology
	EBV serology
	JC virus status

Dashboard

Overall score: 0%

1 -

Question 208 of 280

□ □

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	Syphilis serology
	Hepatitis C serology
	EBV serology
	JC virus status

Dashboard

Overall score: **0%**

1 -

Question 209 of 280



A 21-year-old man is referred to the ophthalmology clinic. He has a past medical history of type 1 diabetes mellitus which has been poorly controlled as he has recently started university and is living away from home for the first time. This has caused him to monitor his blood sugars less frequently as he is embarrassed about his medical problem and is keen to fit in. He has no visual symptoms but fundoscopy demonstrates microaneurysms and cotton wool spots. He has no other known medical problems and uses biphasic insulin. His observations are all within normal range visual acuity is normal.

Apart from advising and support in managing his diabetes, how should he be managed?

	Referral for retinal laser treatment
	Annual digital retinal photography
	Six monthly digital retinal photography
	Start ramipril
	Start amlodipine

Dashboard

Overall score: 0%
1 -

Question 209 of 280

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<input type="checkbox"/>	Six monthly digital retinal photography
<input type="checkbox"/>	Start ramipril
<input type="checkbox"/>	Start amlodipine

Dashboard

Overall score: **0%**

1 -

Question 210 of 280

□ □

A 67 year old male presents to your neurology clinic with his wife, reporting a 3 month history of worsening vision in his left eye. He is very reluctant to seek any medical help but says that a number of factors have finally convinced him to attend.

Over the past 2 months, he reports a constant and worsening headache, worse at night and with coughing. He has occasionally felt extremely nauseated and vomited on a number of occasions, at least twice waking him from sleep. His wife also notes significant personality change: her husband is a retired farmer who prides him on being a stoic man. She notes that he has become increasingly emotional and occasionally aggressive, which she puts down however to struggling with his symptoms. Prior to these symptoms starting 3 months ago, he has always been fit and well with no past medical or drug history.

On examination, you note a left relative afferent papillary defect with equally sized pupils. Visual acuity in the left eye is 6/60 and 6/9 on the right. Testing of colour vision with Ishihara plates demonstrate 0/17 on the left and 17/17 on the right. A central scotoma is found in the left eye. Fundoscopy of the left eye reveals a pale optic disc with poor vasculature while the right appears swollen. A full range of painless eye movements is demonstrated. The remaining examination of the cranial nerves, upper and lower limbs are unremarkable. Bloods are unremarkable, a MRI head is awaited.

What is the most likely diagnosis?

	Foster-Kennedy syndrome
	Idiopathic intracranial hypertension (IIH)
	Multiple sclerosis (MS)
	Fronto-temporal dementia
	Age related macular degeneration (ARMD)

Overall score: **0%**

1 -

Question 210 of 280

□ □

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	Idiopathic intracranial hypertension (IIH)
	Multiple sclerosis (MS)
	Fronto-temporal dementia
	Age related macular degeneration (ARMD)

Overall score: **0%**

1 -

Question 211 of 280

□ □

A 52 year old male is brought to A&E by his concerned wife after tripping and falling down a flight of 12 stairs at home, hitting his head on the way down. The patient himself is not concerned and believes he could have stayed at home.

He denies headache, reports no nausea or vomiting, no seizures and did not lose consciousness between the fall and when you examine him. He is not taking any regular medications including anticoagulants and remembers the whole episode except for about 20 seconds after landing at the bottom of the floor. On examination, he has no limb weakness or loss of sensation. His pupils are equal and reactive bilaterally. What is the most appropriate management?

	Discharge, no further investigations required
	Discharge, outpatient CT head within 72 hours
	Observe for 24 hours and discharge if no deterioration
	CT head immediately
	CT head within 8 hours of injury

Dashboard

Overall score: 0%

1 -

Question 211 of 280

□ □

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	CT head immediately
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Dashboard

Overall score: **0%**

1 -

Question 212 of 280

□ □

A 32 year old female is referred for a neurological opinion. She describes two separate occasions within the last six months of unilateral blurred visual loss. Her symptoms developed over a few days, comprising blurring of the vision and pain, particularly on eye movement. On both occasions this peaked within three days then gradually resolved over two weeks. Lumbar puncture reveals elevated protein level and CSF pleocytosis. Serum Aquaporin-4 is positive. What is the most likely diagnosis?

	Multiple sclerosis
	Neuromyelitis optica
	Leptomeningeal gliomatosis
	Myasthenia gravis
	Idiopathic intracranial hypertension

Dashboard

Overall score: 0%

1 -

Question 212 of 280

□ □

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Dashboard

Overall score: **0%**

1 -

□ Question 213 of 280

□ □

You are called to see a 67 year old lady by the Psychiatry SHO who is asking for your opinion on management. Over the past 3 weeks, her husband has become increasingly concerned by her behaviour. She has become suspicious of him and accused him of stealing my true husband Initially the lady would avoid her husband and refuse to eat food that she had prepared but today she threatened him with a knife and the police had to be called.

The psychiatry SHO is concerned as he notes that she was admitted to hospital 5 weeks ago and was treated for a suspected urinary tract infection with intravenous antibiotics. Subsequent testing showed the pathogen to be an extended spectrum beta lactamase producing bacteria. She currently has a temperature of 38.7 degrees heart rate 105bpm regular RR 18 Sats 99% on room air. Her husband notes that she has been spending more time in the toilet over the past 3 weeks but is unsure if this is due to her paranoia. Blood tests have not been acquired at this point due to no co-operation of the patient.

Her husband describes an episode 30 years ago where she required antidepressants, antipsychotics and ECT after a close family bereavement. She also takes amlodipine 5mg PO OD for hypertension. She is otherwise well and has no history of cognitive problems. Her husband states that there is a strong history of mental health problems in her family but he is unable to be more specific.

When you speak to her she appears to be confused and scores 19/30 on the Mini Mental State Examination. She can point to, name and recognise her husband and can also pick him out from pictures. However, she tells you that the man standing next to her is not her husband but a lookalike who has replaced him. Despite all your best efforts to show evidence to the contrary she cannot be persuaded to change her opinion.

Which of the following below would best describe her presentation:

	Delirium causing Cotard syndrome
	Delirium causing Fregoli syndrome
	Delirium causing Capgras syndrome
	Late onset schizophrenia causing Capgras syndrome
	Atypical severe depression

Dashboard

Overall score: **0%**

1 -

Question 213 of 280



You are called to see a 67 year old lady by the Psychiatry SHO who is asking for your opinion on management. Over the past 3 weeks, her husband has become increasingly concerned by her behaviour. She has become suspicious of him and accused him of stealing my true husband Initially the lady would avoid her husband and refuse to eat food that she had prepared but today she threatened him with a knife and the police had to be called.

The psychiatry SHO is concerned as he notes that she was admitted to hospital 5 weeks ago and was treated for a suspected urinary tract infection with intravenous antibiotics. Subsequent testing showed the pathogen to be an extended spectrum beta lactamase producing bacteria. She currently has a temperature of 38.7 degrees heart rate 105bpm regular RR 18 Sats 99% on room air. Her husband notes that she has been spending more time in the toilet over the past 3 weeks but is unsure if this is due to her paranoia. Blood tests have not been acquired at this point due to no co-operation of the patient.

Her husband describes an episode 30 years ago where she required antidepressants, antipsychotics and ECT after a close family bereavement. She also takes amlodipine 5mg PO OD for hypertension. She is otherwise well and has no history of cognitive problems. Her husband states that there is a strong history of mental health problems in her family but he is unable to be more specific.

When you speak to her she appears to be confused and scores 19/30 on the Mini Mental State Examination. She can point to, name and recognise her husband and can also pick him out from pictures. However, she tells you that the man standing next to her is not her husband but a lookalike who has replaced him. Despite all your best efforts to show evidence to the contrary she cannot be persuaded to change her opinion.

Which of the following below would best describe her presentation:

<input type="checkbox"/>	Delirium causing Cotard syndrome
<input type="checkbox"/>	Delirium causing Fregoli syndrome
<input checked="" type="checkbox"/>	Delirium causing Capgras syndrome
<input type="checkbox"/>	Late onset schizophrenia causing Capgras syndrome
<input type="checkbox"/>	Atypical severe depression

Dashboard

Overall score: **0%**

1 -

Question 214 of 280

□ □

A 28-year-old male presents with feet, hand and perioral paresthesia associated with progressive weakness in his lower limbs over approximately two weeks. On examination he has normal tone and reduced reflexes in his lower limbs, reduced proprioception in feet and hands, and proximal weakness in his lower limbs. His MRI spine was unremarkable.

Other results:

CSF protein	2.0g/L
HIV	negative
Lyme serology	negative
Epstein-Barr virus	negative

What is the correct treatment?

	Intravenous immunoglobulins
	Intravenous methylprednisolone
	Cyclophosphamide infusion
	Pyridostigmine
	Doxycycline

Dashboard

Overall score: 0%

1 -

Question 214 of 280

□ □

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Lyme serology	negative
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What is the correct treatment?

	Intravenous immunoglobulins
	Intravenous methylprednisolone
	Cyclophosphamide infusion
	Pyridostigmine
	Doxycycline

Dashboard

Overall score: **0%**

1 -

Question 215 of 280



A 28-year-old gentleman student from Germany presents to you with right foot drop ongoing for two weeks with some numbness and tingling of the foot. These symptoms developed after he knelt down to pick something up from the floor. Three years ago he woke up from sleep with clawing of his fourth and fifth digit after having been asleep in a prone position and this lasted a week. Eight years ago he also had a left wrist and finger drop lasting three weeks after he sat on the couch with his left arm draped over the back of the couch for ten minutes. He denies falling asleep or remaining on the couch for a prolonged period. He has no other past medical history of note and has never sought medical advice for his problems. On examination, there is right foot drop (2/5 power) and similar weakness of dorsiflexion and eversion of the right foot. There is also sensory loss over the lower lateral part of the right leg and dorsum of the right foot in all modalities. Reflexes are intact. Neurological examination and general examination are otherwise unremarkable. Which of the following tests would confirm the suspected diagnosis?

	Nerve conduction studies
	Electromyography
	Nerve biopsy
	PMP22 gene testing
	HBA1C

Dashboard

Overall score: 0%

1 -

Question 215 of 280

A 28-year-old gentleman student from Germany presents to you with right foot drop ongoing for two weeks with some numbness and tingling of the foot. These symptoms developed after he knelt down to pick something up from the floor. Three years ago he woke up from sleep with clawing of his fourth and fifth digit after having been asleep in a prone position and this lasted a week. Eight years ago he also had a left wrist and finger drop lasting three weeks after he sat on the couch with his left arm draped over the back of the couch for ten minutes. He denies falling asleep or remaining on the couch for a prolonged period. He has no other past medical history of note and has never sought medical advice for his problems. On examination, there is right foot drop (2/5 power) and similar weakness of dorsiflexion and eversion of the right foot. There is also sensory loss over the lower lateral part of the right leg and dorsum of the right foot in all modalities. Reflexes are intact. Neurological examination and general examination are otherwise unremarkable. Which of the following tests would confirm the suspected diagnosis?

	Nerve conduction studies
	Electromyography
	Nerve biopsy
	PMP22 gene testing
	HBA1C

Dashboard

Overall score: 0%

1 -

Question 216 of 280

□ □

A 48-year-old lady develops a sudden-onset left-sided headache in the face and neck areas 36 hours ago whilst at rest. It is of 10/10 severity and reached this maximum intensity within seconds. It has not subsided since and is throbbing in nature. She also developed a transient period of loss of vision in the left eye lasting 2 hours before resolving. She also says that 'food tastes funny' since these problems developed. On examination, she has small, sluggishly light-responsive left pupil compared to the right and partial left ptosis. The face is otherwise unremarkable to examine as is the remaining neurological examination. Routine blood investigations are unremarkable. Plain computerised tomography (CT) of the head is unremarkable. Lumbar puncture is negative for xanthochromia. CT angiogram of the head and neck vessels demonstrates a pseudo-lumen of the carotid artery. Which of the following treatments would you initiate?

	High flow 100% oxygen
	Prednisolone
	Indomethacin
	Aspirin
	Acetazolamide

Dashboard

Overall score: 0%

1 -

Question 216 of 280

□ □

A 48-year-old lady develops a sudden-onset left-sided headache in the face and neck areas 36 hours ago whilst at rest. It is of 10/10 severity and reached this maximum intensity within seconds. It has not subsided since and is throbbing in nature. She also developed a transient period of loss of vision in the left eye lasting 2 hours before resolving. She also says that 'food tastes funny' since these problems developed. On examination, she has small, sluggishly light-responsive left pupil compared to the right and partial left ptosis. The face is otherwise unremarkable to examine as is the remaining neurological examination. Routine blood investigations are unremarkable. Plain computerised tomography (CT) of the head is unremarkable. Lumbar puncture is negative for xanthochromia. CT angiogram of the head and neck vessels demonstrates a pseudo-lumen of the carotid artery. Which of the following treatments would you initiate?

	High flow 100% oxygen
	Prednisolone
	Indomethacin
	Aspirin
	Acetazolamide

Dashboard

Overall score: **0%**

1 -

Question 217 of 280

□ □

A 55-year-old male presents with a 3-week history of speech slurring, dysphagia and droopiness of his eyelids. His only past medical history includes type 2 diabetes mellitus and hypertension, both of which are well controlled. On examination, you note bilateral ptosis with a full range of eye movements. When asked to count upwards from his speech begins to slur at 15. In addition, he spits out upper airway secretions three times during you examination but is able to swallow half a glass of water. Neurological examination of the rest of his cranial nerves, upper and lower limbs are unremarkable. FVC is 85% of predicted. What is the most appropriate treatment?

	Intravenous immunoglobulins
	Plasmapheresis
	Oral pyridostigmine
	Oral prednisolone
	Oral azathioprine

Dashboard

Overall score: 0%

1 -

Question 217 of 280

□ □

A 55-year-old male presents with a 3-week history of speech slurring, dysphagia and droopiness of his eyelids. His only past medical history includes type 2 diabetes mellitus and hypertension, both of which are well controlled. On examination, you note bilateral ptosis with a full range of eye movements. When asked to count upwards from his speech begins to slur at 15. In addition, he spits out upper airway secretions three times during you examination but is able to swallow half a glass of water. Neurological examination of the rest of his cranial nerves, upper and lower limbs are unremarkable. FVC is 85% of predicted. What is the most appropriate treatment?

	Intravenous immunoglobulins
	Plasmapheresis
	Oral pyridostigmine
	Oral prednisolone
	Oral azathioprine

Dashboard

Overall score: **0%**

1 -

□ Question 218 of 280



A 60 yr old woman went swimming with her family, and after finishing her swim and having a shower, her daughter noted that she became confused suddenly, repetitively asking if they had gone for a swim today. She could not remember events that occurred in the past 24 hours, and when told the answers to her questions, would ask the same question 5 minutes later. There was no change in her personality, no change in her speech, nor any muscle weakness. She is able to recall her address, the names of her daughters and husband, and her date of birth. Her daughter said her mother did not suffer any trauma during the swim, and did not lose consciousness anytime throughout the day. The patient's past medical history includes hypertension and depression, and she takes ramipril 2.5mg once daily, and citalopram 20mg once daily.

On examination the patient was alert, but constantly asked where she was and why was she in hospital. She was afebrile, heart rate 80 bpm, blood pressure 138/68 mmHg, respiratory rate of 18 breaths per minute, and oxygen saturation of 99% on air. Neurological examination was unremarkable, but her abbreviated mental test score was 6/10.

Her investigation results were as follow:

C Reactive protein	4 mg/l
Haemoglobin	14.8 g/dl
White cell count	$5.6 \times 10^9/L$
Na+	142 mmol/l
K+	4.3 mmol/l
Urea	4.2 mmol/l
Creatinine	68 μ mol/l
Corrected calcium	2.32 mmol/l
Plasma glucose	5.8 mmol/l

Computer Tomography (CT) head scan No acute intracranial pathology.

Over the next 12 hours, her memory improves and she is discharged from the observation ward.

What is the best advice for the patient with regards to driving in the future?

	She can drive 4 weeks after the event if the cause has been identified and treated
	DVLA need not be notified, no driving restrictions
	She must be symptom free for 1 year before being eligible to drive
	DVLA must be informed, and her licence will be revoked for 6 months
	She must cease driving until there is satisfactory control of her symptoms

Dashboard

Overall score: 0%

1 -

□ Question 218 of 280



A 60 yr old woman went swimming with her family, and after finishing her swim and having a shower, her daughter noted that she became confused suddenly, repetitively asking if they had gone for a swim today. She could not remember events that occurred in the past 24 hours, and when told the answers to her questions, would ask the same question 5 minutes later. There was no change in her personality, no change in her speech, nor any muscle weakness. She is able to recall her address, the names of her daughters and husband, and her date of birth. Her daughter said her mother did not suffer any trauma during the swim, and did not lose consciousness anytime throughout the day. The patient's past medical history includes hypertension and depression, and she takes ramipril 2.5mg once daily, and citalopram 20mg once daily.

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Dashboard

Overall score: 0%

1 -

Question 219 of 280

□ □

A 49-year-old male presents to the Emergency Department with sudden onset left sided weakness nine hours ago. His partner has brought him into hospital late after finding him collapsed but conscious in his kitchen after she returned home. His past medical history includes diabetes and hypertension, for which he has been non-compliant with his medications for the past 2 years. On examination, he is drowsy but rousable to minor stimulation. He displays a gaze preference to the right and a left forehead-sparing facial palsy. Power in his left upper and lower limbs score 0/5, right arm and leg score 5/5. He is unaware of his left upper and lower limb being stimulated by painful stimuli. His speech is mildly dysarthric, obeys commands and displays no dysphasic symptoms. His NIHSS score is 18. A hyperacute CT head demonstrates an evolving right middle cerebral artery infarct involving 55% of the right MCA territory. What is the optimal next management action?

	Aspirin 300mg only
	Aspirin 300mg and clopidogrel 300mg
	Aspirin and decompressive craniectomy
	Intravenous thrombolysis
	Intravenous thrombolysis and thrombectomy

Dashboard

Overall score: 0%

1 -

Question 219 of 280

A 49-year-old male presents to the Emergency Department with sudden onset left sided weakness nine hours ago. His partner has brought him into hospital late after finding him collapsed but conscious in his kitchen after she returned home. His past medical history includes diabetes and hypertension, for which he has been non-compliant with his medications for the past 2 years. On examination, he is drowsy but rousable to minor stimulation. He displays a gaze preference to the right and a left forehead-sparing facial palsy. Power in his left upper and lower limbs score 0/5, right arm and leg score 5/5. He is unaware of his left upper and lower limb being stimulated by painful stimuli. His speech is mildly dysarthric, obeys commands and displays no dysphasic symptoms. His NIHSS score is 18. A hyperacute CT head demonstrates an evolving right middle cerebral artery infarct involving 55% of the right MCA territory. What is the optimal next management action?

	Aspirin 300mg only
	Aspirin 300mg and clopidogrel 300mg
	Aspirin and decompressive craniectomy
	Intravenous thrombolysis
	Intravenous thrombolysis and thrombectomy

Dashboard

Overall score: 0%

1 -

Question 220 of 280

A 28-year-old lady presents to the emergency department with a 4-day history of generalised headache that is worse on lying down. She reports it has gradually become worse and she has also noticed blurred vision since yesterday. Her past medical history includes chronic back pain, acne and anxiety. On examination, she is noted to be overweight. Fundoscopy shows papilloedema. Further investigations point to a diagnosis of idiopathic intracranial hypertension. Which of the following of her medications is associated with this condition?

<input type="checkbox"/>	Tramadol
<input type="checkbox"/>	Tetracycline antibiotics
<input type="checkbox"/>	Diazepam
<input type="checkbox"/>	Amitriptyline
<input type="checkbox"/>	Ibuprofen

Dashboard

Overall score: **0%**

1 -

Question 220 of 280

A 28-year-old lady presents to the emergency department with a 4-day history of generalised headache that is worse on lying down. She reports it has gradually become worse and she has also noticed blurred vision since yesterday. Her past medical history includes chronic back pain, acne and anxiety. On examination, she is noted to be overweight. Fundoscopy shows papilloedema. Further investigations point to a diagnosis of idiopathic intracranial hypertension. Which of the following of her medications is associated with this condition?

	Tramadol
	Tetracycline antibiotics
	Diazepam
	Amitriptyline
	Ibuprofen

Dashboard

Overall score: **0%**

1 -

Question 221 of 280

A 32 year old female patient presents with 48 hours of new onset vertiginous symptoms and speech slurring. She has no past medical history and is a non-smoker. On examination, you notice a left partial ptosis and miosis. Finger-nose coordination is impaired with her left arm and she also has reduced sensation to your cold tuning fork on her left face, right arm and right leg. What is the diagnosis?

<input type="checkbox"/>	Bilateral cerebellar infarcts
<input type="checkbox"/>	Right middle cerebral artery ischaemic infarct
<input type="checkbox"/>	Left middle cerebral artery ischaemic infarct
<input type="checkbox"/>	Lateral medullar brainstem infarct
<input type="checkbox"/>	Left basal ganglia haemorrhage

Dashboard

Overall score: **0%**

1 -

Question 221 of 280

□ □

A 32 year old female patient presents with 48 hours of new onset vertiginous symptoms and speech slurring. She has no past medical history and is a non-smoker. On examination, you notice a left partial ptosis and miosis. Finger-nose coordination is impaired with her left arm and she also has reduced sensation to your cold tuning fork on her left face, right arm and right leg. What is the diagnosis?

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	Right middle cerebral artery ischaemic infarct
	Left middle cerebral artery ischaemic infarct
	Lateral medullar brainstem infarct
	Left basal ganglia haemorrhage

Dashboard

Overall score: **0%**

1 -

Question 222 of 280

□ □

A 60-year-old female presents to the Emergency Department with altered sensation in both hands and reduced visual acuity in the left eye. She states that these symptoms have slowly worsened over a week. She has no issues with bladder or bowel activity.

On examination, she is haemodynamically stable. Of note, she has a sensory loss throughout her arms and legs, but no clear sensory level. Additionally, she has brisk reflexes in both the upper and lower limbs. She also has a visual acuity of 6/36 in the left eye, but normal vision in the right eye, with normal visual fields.

Her MRI scan reveals multiple continuous segments of inflamed spinal cord throughout the cervical region and left optic nerve inflammation. There are no cerebral lesions. Her cerebrospinal fluid (CSF) studies are negative for oligoclonal bands.

Which of the following tests will confirm the diagnosis?

	dsDNA antibodies
	Aquaporin-4 antibodies
	ACh receptor antibodies
	NMDA receptor antibodies
	Neuronal antibodies

Dashboard

Overall score: 0%

1 -

Question 222 of 280

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	Aquaporin-4 antibodies
	ACh receptor antibodies
	NMDA receptor antibodies
	Neuronal antibodies

Dashboard

Overall score: 0%

1 -

Question 223 of 280

□ □

A 43-year-old man is apprehended by the police after a violent assault outside a pub. He is brought to the attention of the duty psychiatrist because he is extremely confused and agitated. He repeatedly says that his wife is having an affair with the Prime Minister. He believes this to be true because of a message encoded in the traffic lights. He also mentions that he has not slept in the last two days.

The psychiatric assessment is interrupted when he has a tonic-clonic seizure, which self-terminates in 3 minutes. He is taken to the local Accident and Emergency department and reviewed by the medical team.

The medical SHO manages to contact his wife, who reports that he is normally fit and well and she last saw him when he left for work five days ago. At that time he appeared normal but complained of a headache, and took some ibuprofen.

During the clerking, he is noted to have repetitive chewing movements of the mouth. Again, the assessment is interrupted by a tonic-clonic seizure which does not terminate after 10mg of intravenous diazepam. After 15 minutes he is loaded with phenytoin. He continues to fit so is intubated and transferred to the Intensive Care Unit. Termination of seizure activity is only achieved after induction of general anaesthesia with thiopentone.

What is the most likely diagnosis?

	Schizophrenia
	Fronto-temporal dementia
	Acute intermittent porphyria
	Post-ictal psychosis
	Autoimmune limbic encephalitis

Overall score: **0%**

1 -

Question 223 of 280

□ □

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What is the most likely diagnosis?

	Schizophrenia
	Fronto-temporal dementia
	Acute intermittent porphyria
	Post-ictal psychosis
	Autoimmune limbic encephalitis

Overall score: **0%**

1 -

Question 224 of 280

□ □

A 55-year-old man is reviewed in psychiatric clinic. He has been referred by his GP who has been unable to manage his depression. He has a past medical history of hypertension, previous acute coronary syndrome one year ago, high cholesterol and depression. He mentions that his mood has worsened and that he is having persistent thoughts about taking his own life to the point where he is scared that he might 'do something'. There are no effects on his cognition, concentration or any sleep disturbance. What advice should he be given in regards to driving?

	No restrictions on driving
	No restrictions on driving but must inform the DVLA
	Can drive a car but not lorry or bus
	Can drive a car but not lorry or bus and must inform the DVLA
	Must not drive and must inform the DVLA

Dashboard

Overall score: 0%

1 -

Question 224 of 280

□ □

A 55-year-old man is reviewed in psychiatric clinic. He has been referred by his GP who has been unable to manage his depression. He has a past medical history of hypertension, previous acute coronary syndrome one year ago, high cholesterol and depression. He mentions that his mood has worsened and that he is having persistent thoughts about taking his own life to the point where he is scared that he might 'do something'. There are no effects on his cognition, concentration or any sleep disturbance. What advise should he be given in regards to driving?

<input type="radio"/>	No restrictions on driving
<input type="radio"/>	No restrictions on driving but must inform the DVLA
<input type="radio"/>	Can drive a car but not lorry or bus
<input type="radio"/>	Can drive a car but not lorry or bus and must inform the DVLA
<input checked="" type="radio"/>	Must not drive and must inform the DVLA

Dashboard

Overall score: **0%**

1 -

Question 225 of 280

□ □

A 19 year old woman presents to the general medical clinic for review. She has been referred due to drooping of her eyelids, first on the right and now bilaterally. On further questioning she reveals that she has been struggling to read in dim light and recalls that two family members have required insertion of cardiac pacemakers. Examination reveals partial bilateral ptosis and a generalised ophthalmoplegia in all directions of gaze. Fundoscopy demonstrates central areas of dark pigmentation on a pale fundus.

From the options given which investigation is most likely to reveal the diagnosis?

	Serum for anti-acetylcholine receptor antibodies
	Serum for anti-voltage gated calcium channel receptor antibodies
	Muscle biopsy
	Karotyping
	Thyroid function tests

Dashboard

Overall score: 0%

1 -

Question 225 of 280

□ □

A 19 year old woman presents to the general medical clinic for review. She has been referred due to drooping of her eyelids, first on the right and now bilaterally. On further questioning she reveals that she has been struggling to read in dim light and recalls that two family members have required insertion of cardiac pacemakers. Examination reveals partial bilateral ptosis and a generalised ophthalmoplegia in all directions of gaze. Fundoscopy demonstrates central areas of dark pigmentation on a pale fundus.

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	Serum for anti-acetylcholine receptor antibodies
	Serum for anti-voltage gated calcium channel receptor antibodies
	Muscle biopsy
	Karotyping
	Thyroid function tests

Dashboard

Overall score: **0%**

1 -

Question 226 of 280



A 77-year-old female was brought into hospital after waking with left arm weakness predominantly affecting the hand with a left sided facial droop in an upper motor neuron pattern. Her blood pressure on admission was 175/90 mmHg and her heart rate was 80 beats per minute and in sinus rhythm. Her blood glucose level on admission was 7.2 mmol/L.

Her initial CT brain showed some mild bi-temporal atrophic change and some chronic small vessel ischaemia without any acute ischaemic changes and in particular, no haemorrhage.

She was admitted with a suspected diagnosis of minor ischaemic stroke. Which of the following imaging modalities will confirm the diagnosis?

	CT cerebral angiogram (CTA)
	Fluid attenuated inversion recovery (FLAIR) MRI
	Thin slice non-contrast enhanced CT brain scan
	Diffusion weighted imaging (DWI) MRI
	Formal cerebral digital subtraction angiogram (DSA)

Dashboard

Overall score: 0%

1 -

Question 226 of 280

□ □

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She was admitted with a suspected diagnosis of minor ischaemic stroke. Which of the following imaging modalities will confirm the diagnosis?

	CT cerebral angiogram (CTA)
	Fluid attenuated inversion recovery (FLAIR) MRI
	Thin slice non-contrast enhanced CT brain scan
	Diffusion weighted imaging (DWI) MRI
	Formal cerebral digital subtraction angiogram (DSA)

Dashboard

Overall score: **0%**

1 -

□ Question 227 of 280



A 37-year-old female presents to the medical outpatient department with a progressive loss of libido. She attributes this to persistent diarrhoea, which she has noted over the last 6 months. She has also lost 16kg of weight and feels fatigued. She has noticed that her eyes have become grossly protuberant and she has double vision on looking towards either the right or left. She also experiences painful watering of her eyes.

On examination she has a marked tremor in both hands, her heart rate is irregularly irregular and she has marked exophthalmos. There is an audible bruit on auscultation of the thyroid gland.

Her laboratory investigations reveal:

Hb	130 g/l
MCV	77 fl
MCH	29 pg
WBC	$7.4 \times 10^9/l$
Plt	$430 \times 10^9/l$
TSH	0.03 mU/l (0.4 3.6 mU/l)
Total T4	302 nmol/l (68 174 nmol/l)

CT scan of the orbits reveals taut optic nerves and retro-orbital oedema.

Which of the following would be the most appropriate management of his eye condition?

	Treatment with a block and replace regimen
	Treatment with radioactive iodine
	Treatment with IV methylprednisolone
	Surgical removal of the thyroid gland

	Orbital decompression surgery
--	-------------------------------

Dashboard

Overall score: **0%**

1 -

□ Question 227 of 280



A 37-year-old female presents to the medical outpatient department with a progressive loss of libido. She attributes this to persistent diarrhoea, which she has noted over the last 6 months. She has also lost 16kg of weight and feels fatigued. She has noticed that her eyes have become grossly protuberant and she has double vision on looking towards either the right or left. She also experiences painful watering of her eyes.

On examination she has a marked tremor in both hands, her heart rate is irregularly irregular and she has marked exophthalmos. There is an audible bruit on auscultation of the thyroid gland.

Her laboratory investigations reveal:

Hb	130 g/l
MCV	77 fl
MCH	29 pg
WBC	$7.4 \times 10^9/l$
Plt	$430 \times 10^9/l$
TSH	0.03 mU/l (0.4 3.6 mU/l)
Total T4	302 nmol/l (68 174 nmol/l)

CT scan of the orbits reveals taut optic nerves and retro-orbital oedema.

Which of the following would be the most appropriate management of his eye condition?

	Treatment with a block and replace regimen
	Treatment with radioactive iodine
	Treatment with IV methylprednisolone
	Surgical removal of the thyroid gland

	Orbital decompression surgery
--	-------------------------------

Dashboard

Overall score: **0%**
1 -

Question 228 of 280

□ □

A 32-year-old female presents with four episodes of loss of consciousness within the past 4 weeks. She denies palpitations or chest pain but reports sudden onset binocular black dots in visual fields, occasional flashing lights, dysarthria and hearing loss, all of which resolves after about 60 minutes. She is unsure about the relevance of an occipital headache, onset with frequency of about three times per week for the past year. She denies any limb weakness, altered sensation or facial droop. She has no past medical history or family history of epilepsy. Your neurological examination, including fundoscopy is unremarkable. An EEG is unremarkable. What is the likely diagnosis?

	Cluster headache
	Transient ischaemic attacks
	Basilar migraine
	Bilateral retinal detachment
	Guillain-Barre syndrome

Dashboard

Overall score: 0%

1 -

□ Question 228 of 280

□ □

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	Cluster headache
	Transient ischaemic attacks
	Basilar migraine
	Bilateral retinal detachment
	Guillain-Barre syndrome

Dashboard

Overall score: **0%****1** -

Question 229 of 280

□ □

A 55-year-old cachectic male is brought into hospital after having been found on the floor by his sister, who visits him once a week. She reports a long history of depression and his appetite to have been poor for a number of years. He denies any loss of consciousness episodes, palpitations, chest pain, dysphagia or presyncopal symptoms. When asked how he ended up on the floor, he vaguely reports to have slowly fallen from being generally weak and denies head injury. He does report a recent sore throat and dry cough. He is alert and orientated. On examination, he scores 3 and 4 out of 5 power in all movements. Lower limb reflexes could not be elicited with a tendon hammer but bilateral upgoing plantars are noted. Which treatment might reverse the underlying condition most rapidly?

	IV methylprednisolone
	IV immunoglobulin infusion
	Plasmapheresis
	IV thrombolysis
	IM vitamin B12 + IV pabrinex

Dashboard

Overall score: 0%

1 -

Question 229 of 280

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	IV immunoglobulin infusion
	Plasmapheresis
	IV thrombolysis
	IM vitamin B12 + IV pabrinex

Dashboard

Overall score: **0%**

1 -

Question 230 of 280

A 32-year-old man with an inherited condition leading to deafness and retinitis pigmentosa, attends the genetic counselling clinic. His wife is also from the deaf community and has myopia (-2.0) requiring corrective lenses and does not have retinitis pigmentosa or a family history of blindness. She does not carry the gene of the condition described in her husband.

Regarding their children:

<input type="radio"/>	25% chance of having an affected child
<input type="radio"/>	50% chance of having an affected child
<input type="radio"/>	100% chance of having an affected child
<input type="radio"/>	50% will carry the gene but not have the condition
<input type="radio"/>	100% will carry the gene but not have the condition

Dashboard

Overall score: 0%

1 -

Question 230 of 280

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Dashboard

Overall score: **0%**

1 -

Question 230 of 280

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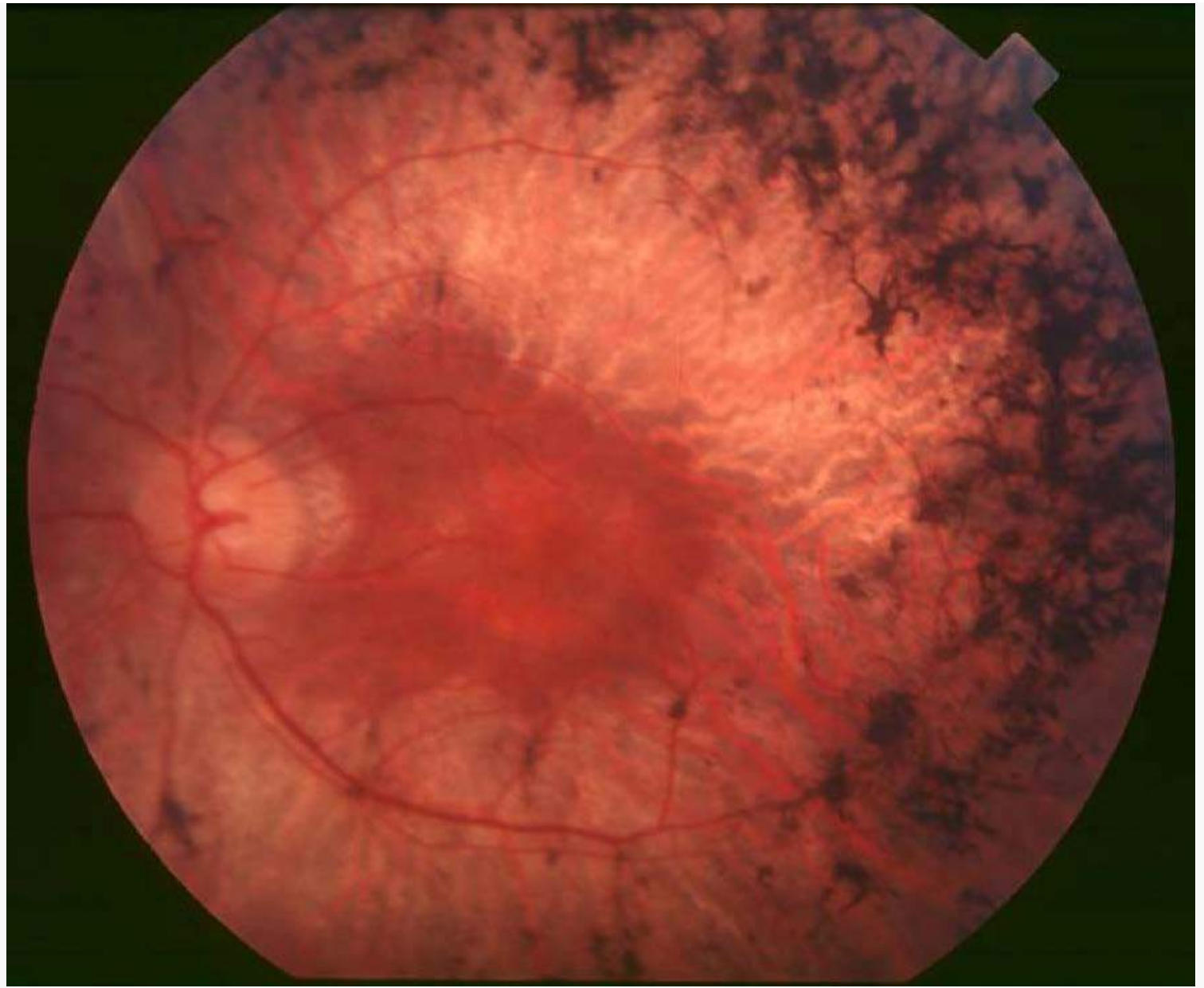
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Dashboard

Overall score: **0%**

1 -



Question 231 of 280

□ □

A 25-year-old woman presented with a fronto-temporal headache, mild meningism and low-grade temperature. A CT head is normal and does not show any evidence of increased intra-cranial pressure. You consent the patient for an lumbar puncture, stating that a post-procedure headache is one of the most common procedures. What is the most important preventative measure for a post-procedure headache?

	Re-insertion of the stylet prior to removing the needle
	Ensure adequate hydration
	Male patient gender
	Patient position during the lumbar puncture
	Bed-rest - lying supine post-procedure

Dashboard

Overall score: 0%

1 -

Question 231 of 280

□ □

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	Bed-rest - lying supine post-procedure

Dashboard

Overall score: **0%**

1 -

Question 232 of 280



A 32-year-old male presents to clinic with shooting pain down both legs for one week and a mildly weak right hand. He does not recall ever having any other remarkable neurological symptoms and has not been diagnosed with any chronic medical illnesses.

He is right handed, and on examination, he has reduced fine motor control in the right hand with a brisk brachioradialis reflex on the right side. He also has subjective sensory disturbance over his trunk, but no objective sensory loss.

You suspect multiple sclerosis (MS), which findings are required to make the diagnosis of relapsing remitting MS?

	A gadolinium enhancing lesion on MRI in a typical region for MS
	At least 2 separate MRI lesions typical of MS that are of different ages (i.e 1 enhancing and 1 not)
	Oligoclonal bands in CSF
	Optic neuritis on examination and abnormal visual evoked potentials
	Observe the patient and await a second clinical episode before a diagnosis can be made

Dashboard

Overall score: 0%

1 -

Question 232 of 280

□ □

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1 -

□ Question 232 of 280

□ □

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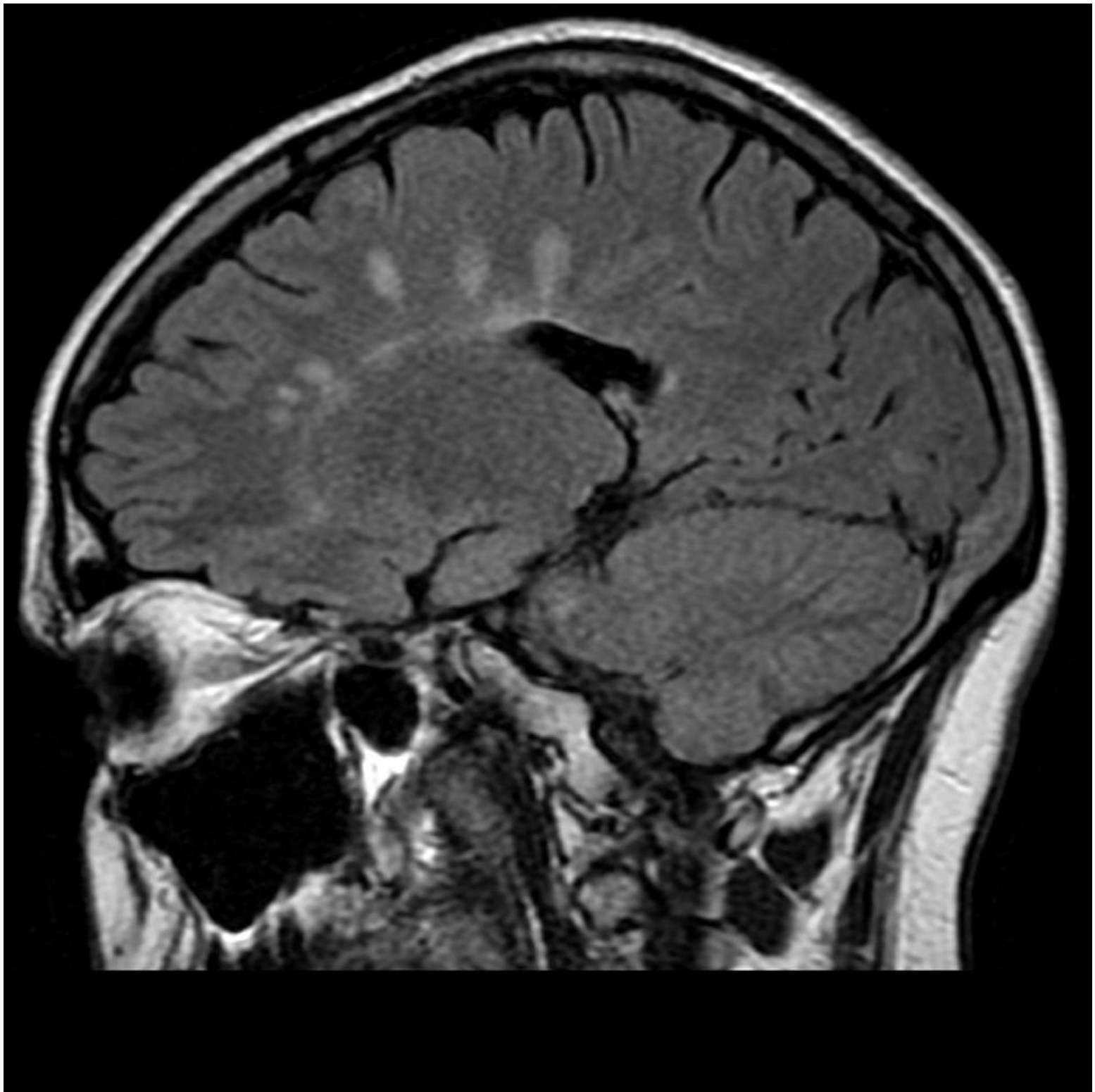
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□ Question 232 of 280

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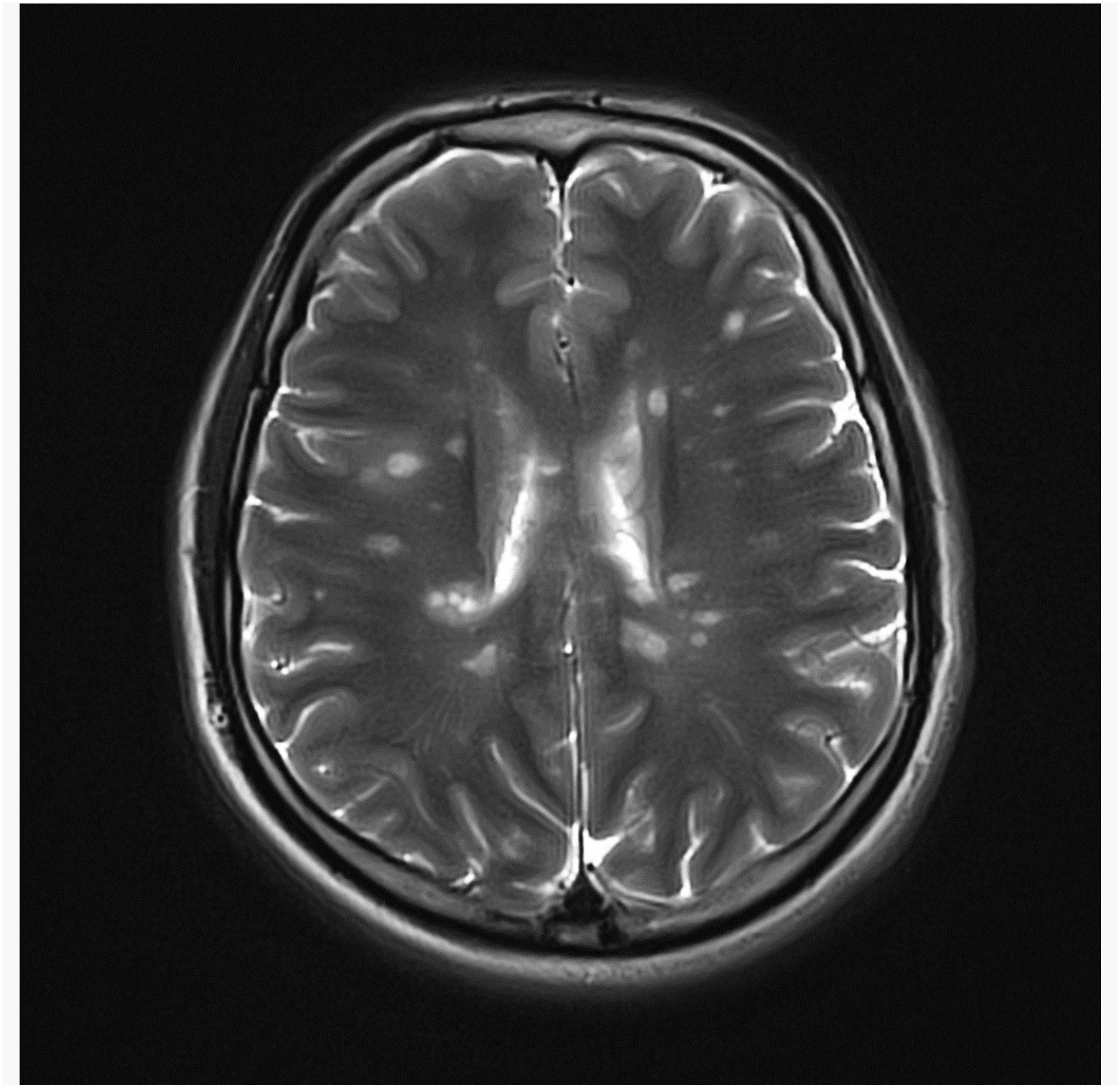
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□ Question 232 of 280

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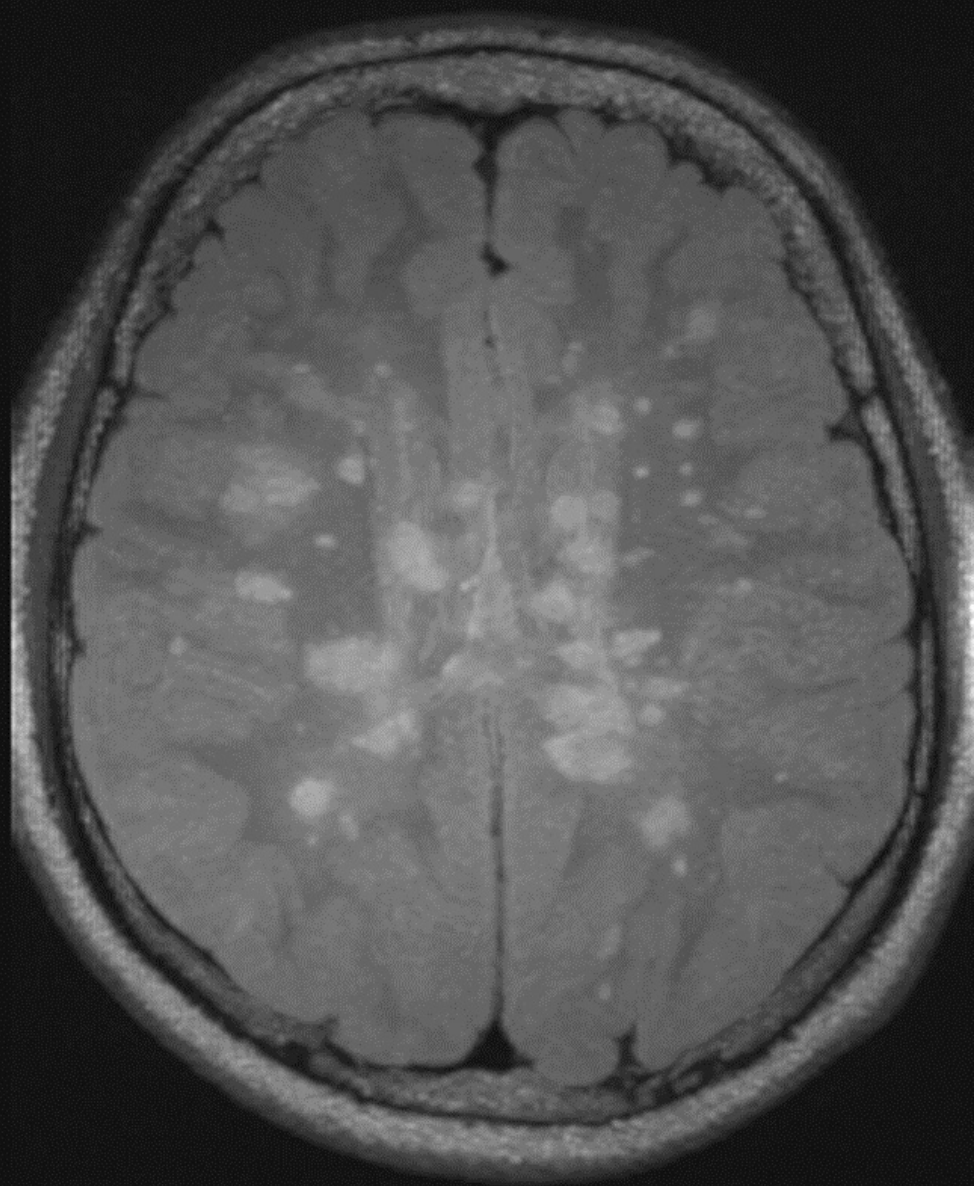
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Dashboard

Overall score: 0%

1 -



Question 233 of 280

□ □

A 27 year old lady with relapsing-remitting multiple sclerosis (MS) is referred to your clinic. She was diagnosed at age 18 and has been managed on interferon β 1a, with only four relapses in her total history. She has made good recovery from all four relapses and the only finding on neurological examination is of mild dysdiadochokinesis of the left arm. She scores functionally very well on an expanded disability status scale (EDSS) and has no disability as a result.

She is planning her first pregnancy and wanted advice on how her MS may be affected. She has already been advised on stopping interferon β 1a in preparation for pregnancy. Aside from the impact of stopping interferon β 1a, she wants to know how pregnancy itself will affect her MS. Which of the following is most accurate?

	Relapse rates may decrease during pregnancy, increase at 3-6 months post-partum then return to pre-pregnancy rates.
	There is an increased risk of developing visual disorders associated with MS.
	There is a 30% chance that her RRMS will evolve into progressive MS.
	There is a 15% chance that her relapse rate will decrease for the five years following pregnancy.
	Relapse rates may increase during pregnancy, then return to pre-pregnancy rates at 9 months post-partum.

Dashboard

Overall score: 0%

1 -

Question 233 of 280

□ □

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	Relapse rates may increase during pregnancy, then return to pre-pregnancy rates at 9 months post-partum.

Dashboard

Overall score: **0%**

1 -

Question 234 of 280



A 50-year-old man is seen in the Emergency Department with fevers. He has been feeling generally unwell for the last 3 days and has just returned from a 2 week stay with his sister who lives on the other side of the U.K. He has had a mild non-productive cough and shortness of breath. He has had no vomiting, diarrhoea, dysuria or abdominal pain.

He has a past medical history of epilepsy, schizophrenia, hypertension and diet-controlled type 2 diabetes.

On examination he has a temperature of 38.3 °C and is saturating at 94% on room air. His heart rate is 111 beats per minute and blood pressure is 118/75 mmHg. He looks clammy and pale but systems examination is otherwise unremarkable.

His chest x-ray shows clear lung fields.

His blood tests are as follows:

Hb	140 g/l	Na ⁺	141 mmol/l
Platelets	443 * 10 ⁹ /l	K ⁺	3.7 mmol/l
WBC	1.5 * 10 ⁹ /l	Urea	7 mmol/l
Neuts	0.6 * 10 ⁹ /l	Creatinine	98 µmol/l
Lymphs	0.5 * 10 ⁹ /l	CRP	170 mg/l

He is started on broad spectrum antibiotics and fluids.

Which drug is most likely to have precipitated this condition?

	Clobazam
	Clozapine
	Phenytoin

	Sodium valproate
	Venlafaxine

Dashboard

Overall score: **0%**
1 -

Question 234 of 280



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	Clozapine
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	Sodium valproate
	Venlafaxine

Dashboard

Overall score: **0%**
1 -

Question 235 of 280

□ □

A 78 year old male presents to you with progressive weakness in his arms. He first saw his GP about 4 months ago complaining of a weakness in his right wrist and was told he had carpal tunnel syndrome, for which he was placed on a waiting list to see the orthopaedic surgeons. Over the next 4 months, he noticed progressive weakness in his right wrist and in bending his right elbow. He noted his right hand was becoming increasingly wasted. Two months ago, he noted similar weakness in his left wrist. He reports no changes to sensation, normal speech and swallowing. On examination, cranial nerves were unremarkable.

Both hands were markedly wasted with significant loss of musculature and fasciculations bilaterally. Reflexes were muted in both upper limbs with negative Hoffman's sign. Sensory examination in the upper limbs were unremarkable, he was unable to perform finger-nose examination. Examination of the lower limbs was also unremarkable but the patient felt a subjective weakness in both hip flexion. MRI imaging of the patients head and spine demonstrated no significant lesions. Nerve conduction studies demonstrated f waves and H reflexes, multiple focal areas of demyelination and motor neuropathic blocks.

What is the optimum management?

	Intravenous cyclophosphamide
	Intravenous immunoglobulin
	Intravenous methylprednisolone
	Plasma exchange
	Riluzole

Dashboard

Overall score: 0%

1 -

Question 235 of 280

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	Intravenous immunoglobulin
	Intravenous methylprednisolone
	Plasma exchange
	Riluzole

Dashboard

Overall score: **0%**

1 -

Question 236 of 280

□ □

A 34 year-old man presents with insidious onset right hand weakness over the last week. He is right hand dominant and struggling to perform basic tasks such as opening a door with a key.

On examination he has marked weakness of thumb flexion at the interphalangeal joint and weakness of flexion of the index and middle finger. There is no detectable sensory deficit.

What is the likely diagnosis?

	C8 nerve root radiculopathy
	Motor neurone disease
	Median nerve palsy
	Carpal tunnel syndrome
	Anterior interosseous syndrome

Dashboard

Overall score: 0%

1 -

Question 236 of 280

□ □

A 34 year-old man presents with insidious onset right hand weakness over the last week. He is right hand dominant and struggling to perform basic tasks such as opening a door with a key.

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What is the likely diagnosis?

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Dashboard

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Question 236 of 280

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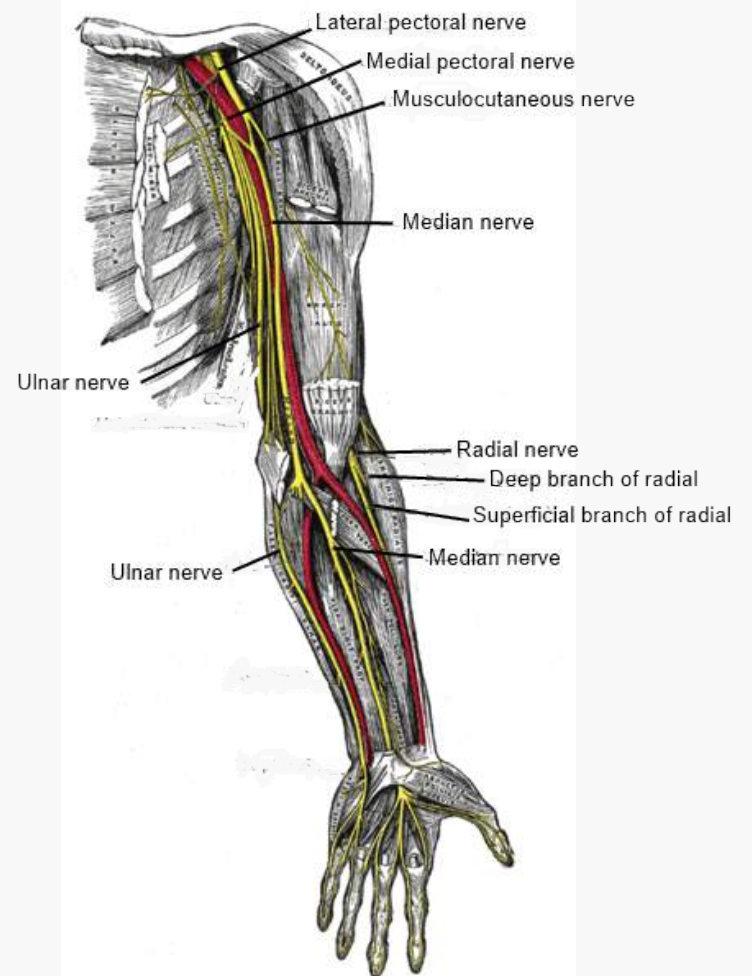
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Dashboard

Overall score: **0%**

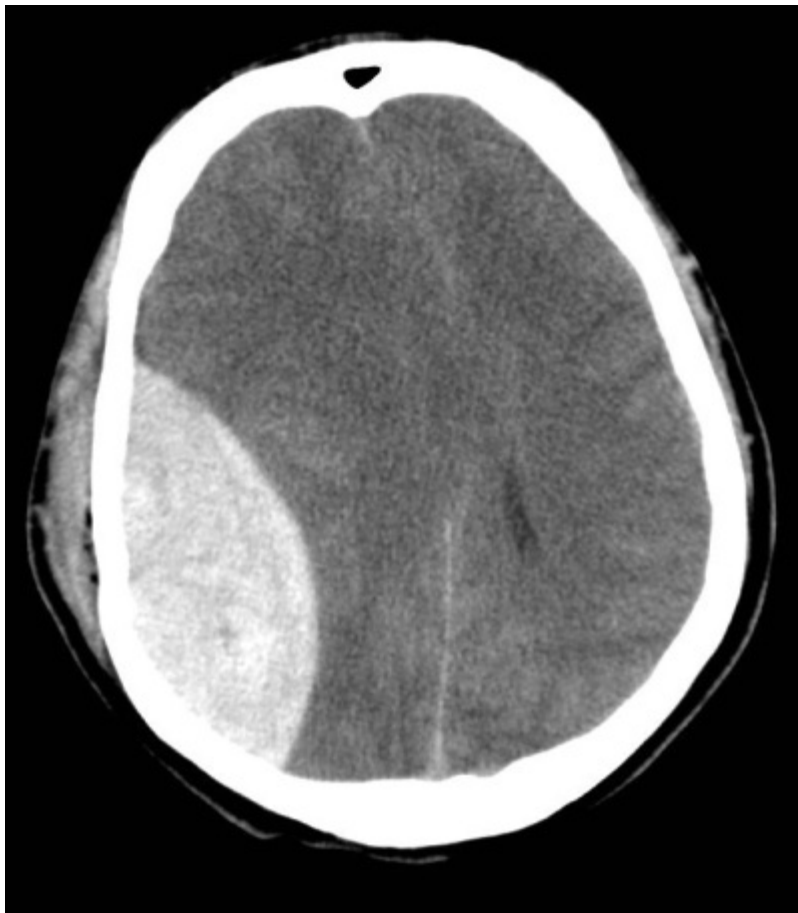
1 -



□ Question 237 of 280

□ □

A 27-year-old woman is admitted to the Emergency Department following a road traffic accident. Primary survey reveals a right-sided haemothorax but she is haemodynamically stable. She is only responding to voice. A CT scan of her head (with contrast) is performed:



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What does the scan show?

--	--

	Subdural haematoma
	Subarachnoid haemorrhage
	Extradural haematoma
	Brain contusion
	Meningioma

Dashboard

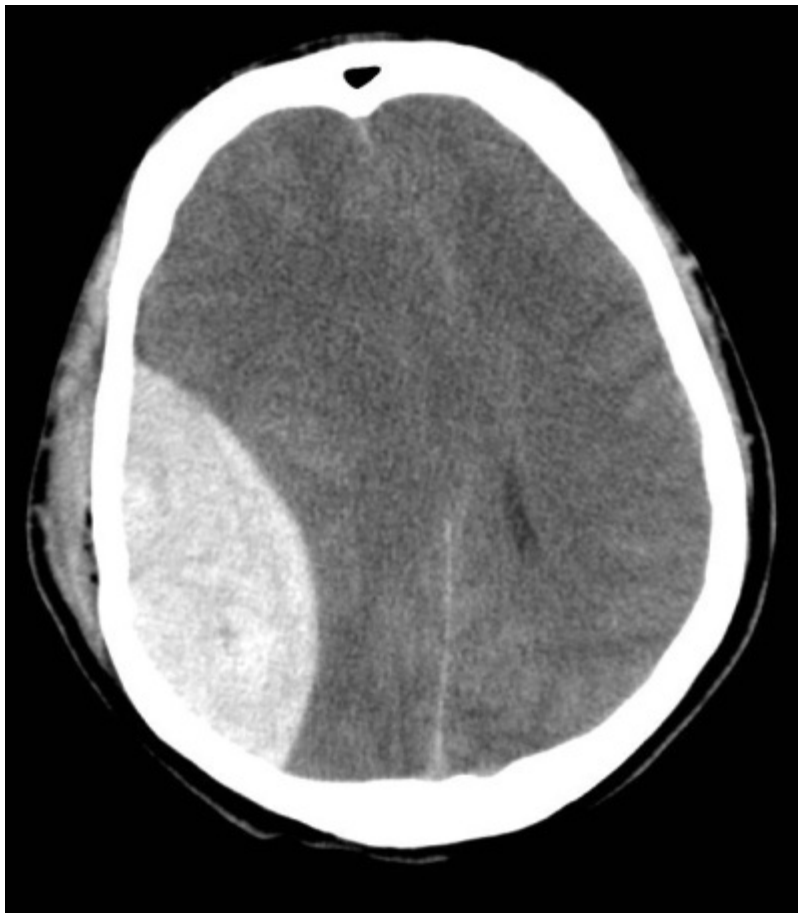
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1 -

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Dashboard

Overall score: **0%**

1 -

Question 237 of 280



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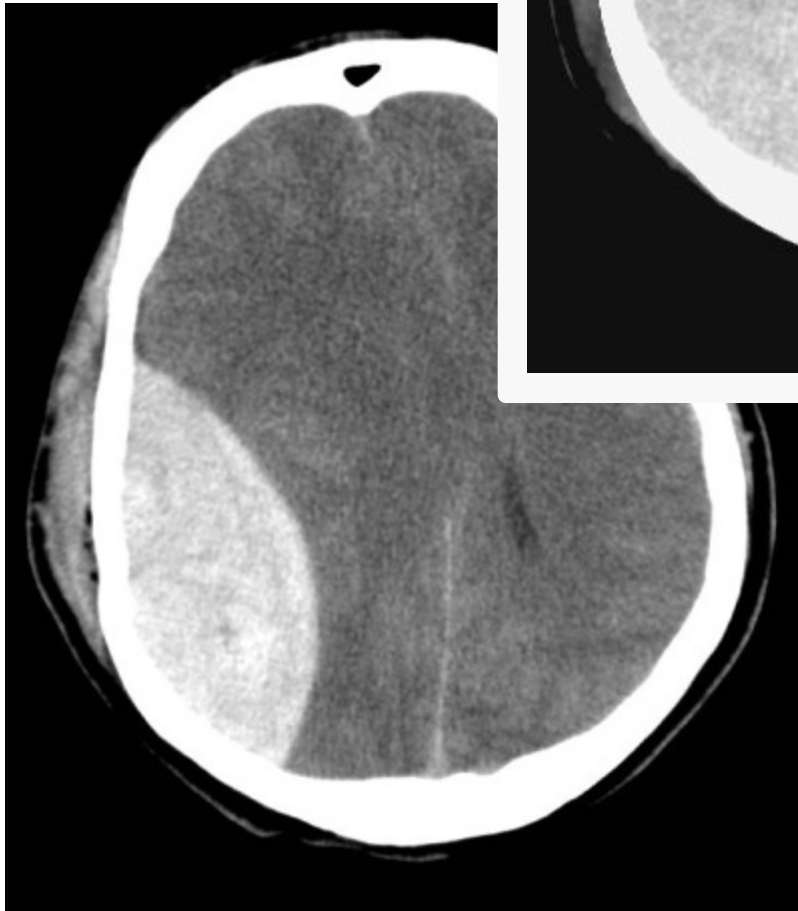
Dashboard

Overall score: 0%



□ Question 237 of 280

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	Meningioma

Dashboard

Overall score: **0%**

1 -

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Question 237 of 280

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- Subdural haematoma
- Subarachnoid haemorrhage
- Extradural haematoma
- Brain contusion
- Meningioma

The CT scan shows a extra-axial biconvex collection associated with fracture suggestive of extradural haematoma.

Please rate this question:



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Head injury: types of traumatic brain injury

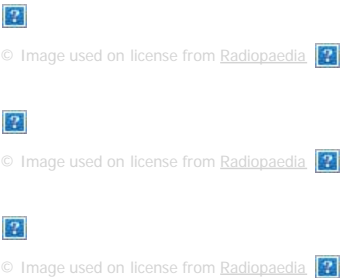
Basics

- primary brain injury may be focal (contusion/haematoma) or diffuse (diffuse axonal injury)
- diffuse axonal injury occurs as a result of mechanical shearing following deceleration, causing disruption and tearing of axons
- intra-cranial haematomas can be extradural, subdural or intracerebral, while contusions may occur adjacent to (coup) or contralateral (contre-coup) to the side of impact
- secondary brain injury occurs when cerebral oedema, ischaemia, infection, tonsillar or tentorial herniation exacerbates the original injury. The normal cerebral auto regulatory processes are disrupted following trauma rendering the brain more susceptible to blood flow changes and hypoxia
- the Cushings reflex (hypertension and bradycardia) often occurs late and is usually a pre terminal event

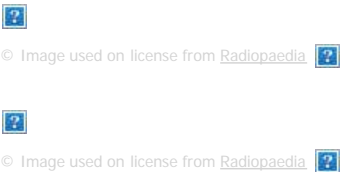
Type of injury	Notes
	Bleeding into the space between the dura mater and the skull. Often results from acceleration-deceleration trauma or a blow to the side of the head. The majority of epidural haematomas occur in the temporal region where skull fractures cause a rupture of the middle meningeal artery.
Extradural (epidural) haematoma	Features <ul style="list-style-type: none">• features of raised intracranial pressure• some patients may exhibit a lucid interval
	Bleeding into the outermost meningeal layer. Most commonly occur around the frontal and parietal lobes.
Subdural haematoma	Risk factors include old age, alcoholism and anticoagulation.
	Slower onset of symptoms than a epidural haematoma.
Subarachnoid haemorrhage	Usually occurs spontaneously in the context of a ruptured cerebral aneurysm but may be seen in association with other injuries when a patient has sustained a traumatic brain injury

Image gallery

Extradural (epidural) haematoma:



Subdural haematoma:



Subarachnoid haemorrhage:



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Next question

×

Insert Image

Select from files

no file selected

Image URL

Insert Image

×

Insert Link

Text to display

To what URL should this link go?

Open in new window

Insert Link

Close

Keyboard shortcuts

Action

Ctrl + Z



Undo

Ctrl + Shift + Z

Redo

Ctrl +]

Indent

Ctrl + [

Outdent

Ctrl + ENTER

Insert Horizontal Rule

Text formatting

Ctrl + B

Bold

Ctrl + I

Italic

Ctrl + U

Underline

Ctrl + \

Remove Font Style

Document Style

Ctrl + NUM0

Normal

Ctrl + NUM1

Header 1

Ctrl + NUM2

Header 2

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- [25](#) 
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123
[124](#) 
[125](#) 
[126](#) 
[127](#) 
[128](#) 
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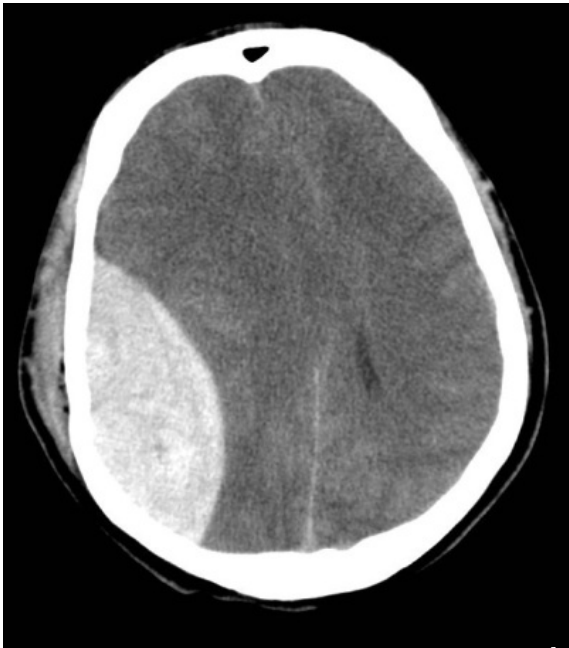
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[Back to top](#)

Question 237 of 280



A 27-year-old woman is admitted to the Emergency Department following a road traffic accident. Primary survey reveals a right-sided haemothorax but she is haemodynamically stable. She is only responding to voice. A CT scan of her head (with contrast) is performed:



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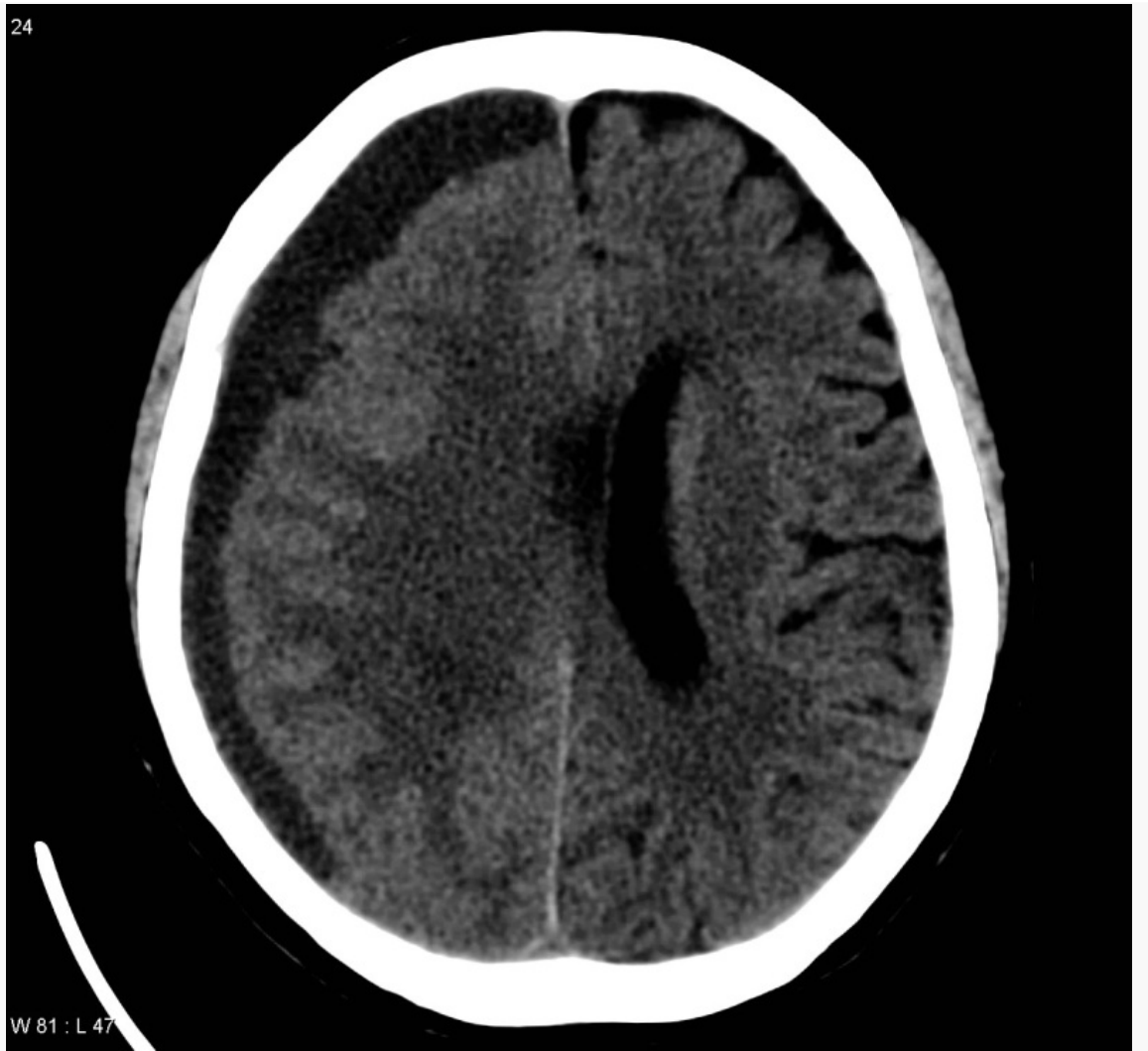
What does the scan show?

	Subdural haematoma
	Subarachnoid haemorrhage
	Extradural haematoma
	Brain contusion
	Meningioma

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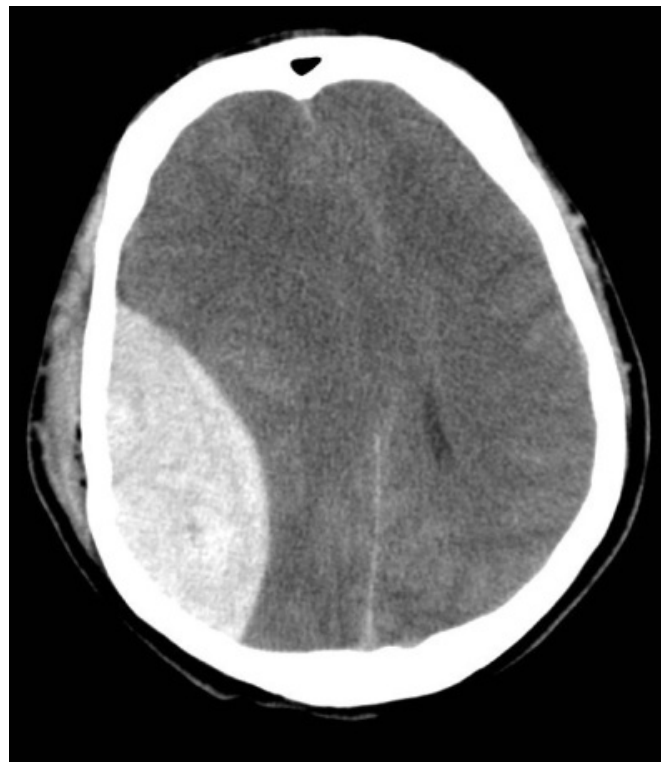
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Question 237 of 280

□ □

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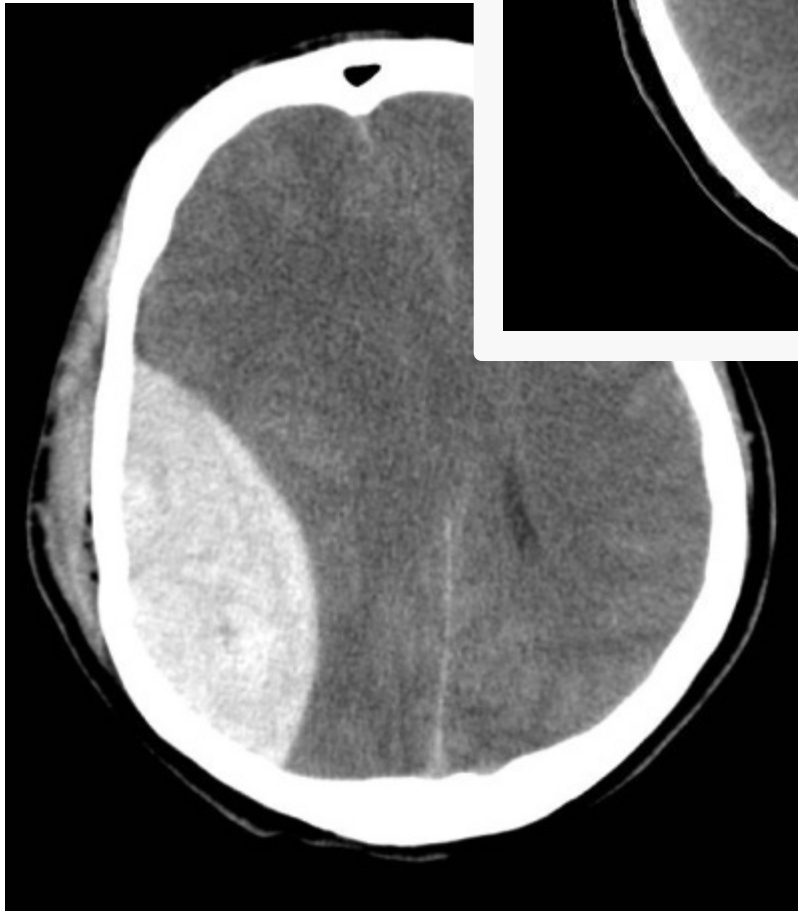
Dashboard

Overall score: **0%**
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□ Question 237 of 280

A 27-year-old woman is admitted to the Emergency Department for a right-sided haemothorax but she is haemodynamically stable. She has a CT scan of the head (with contrast) is performed:



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What does the scan show?

	Subdural haematoma
	Subarachnoid haemorrhage
	Extradural haematoma
	Brain contusion
	Meningioma

Dashboard

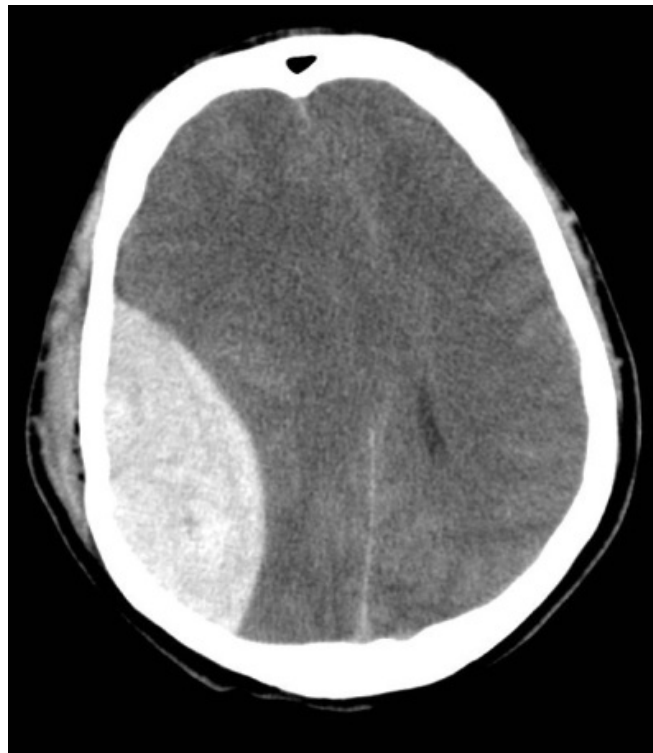
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□ Question 237 of 280

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What does the scan show?

Subdural haematoma

	Subarachnoid haemorrhage
	Extradural haematoma
	Brain contusion
	Meningioma

Dashboard

Overall score: **0%**

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□ Question 238 of 280

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A 78-year-old male presents to the hyperacute stroke unit with a sudden onset left sided hemiparesis and which is subsequently demonstrated to represent an acute ischaemic infarct in the right middle cerebral artery territory with no haemorrhagic transformation. He was not thrombolysed due to presentation being outside the time window. As part of his stroke investigations, echocardiogram demonstrates no mural thrombus or regional wall abnormalities and an ejection fraction of 70%. The 24 hour tape recorded no arrhythmias. Carotid Dopplers demonstrate 40% stenosis in the right internal carotid artery, 55% stenosis in the left internal carotid artery. Blood pressure measured 125/75mmHg. He takes simvastatin 40mg nocte and has no known drug allergies. What would be the optimal treatment?

	Refer to vascular surgery for right carotid endarectomy
	Refer to vascular surgery for left carotid endarectomy
	300mg oral aspirin for 14 days, then clopidogrel 75mg
	Subcutaneous low molecular weight heparin, then warfarin loading
	Perindopril 4mg OD

Dashboard

Overall score: 0%

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Question 238 of 280

□ □

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	Subcutaneous low molecular weight heparin, then warfarin loading
	Perindopril 4mg OD

Dashboard

Overall score: **0%**

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Question 239 of 280

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Which of the following patients fits a diagnosis of neurofibromatosis type 1 according to the National Institute of Health (NIH) criteria?

	A 9-year old male with 2 lisch nodules and 6 cafe au lait macules larger than 5mm diameter
	A 15-year old female with a dysplastic naevus and a 1st-degree relative with neurofibromatosis
	A 22-year old male with a shagreen patch and 10 cafe au lait macules larger than 20mm diameter
	A 25-year old female with axillary freckling and 10 cafe au lait macules larger than 10mm diameter
	A 30-year old male with an acoustic neuroma and a cutaneous neurofibroma

Dashboard

Overall score: **0%**

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Question 239 of 280

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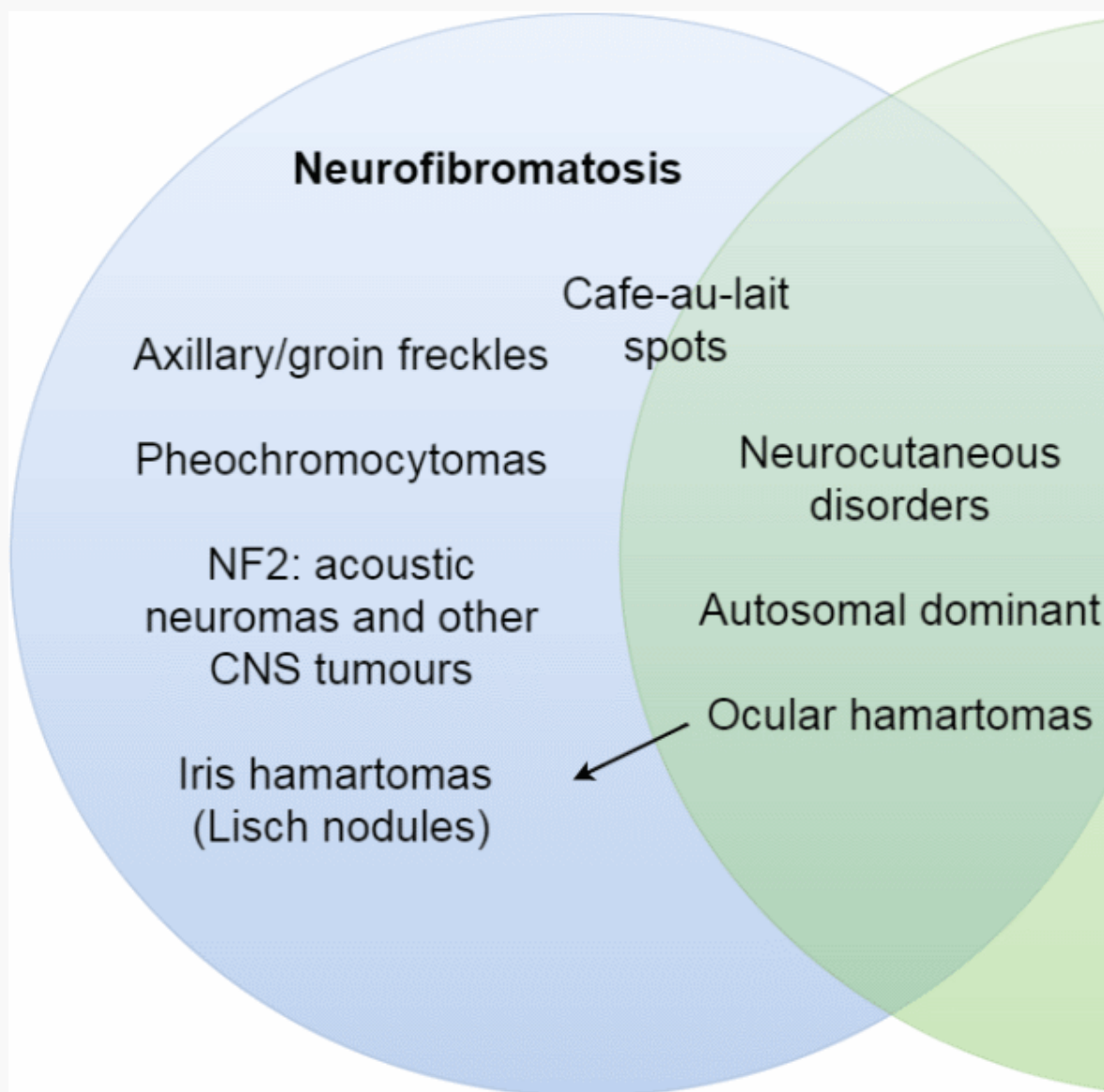
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Question 239 of 280

Which of the following patients meets the (NIH) criteria?

<input type="checkbox"/>	A 9-year old male
<input type="checkbox"/>	A 15-year old female
<input type="checkbox"/>	A 22-year old male
<input type="checkbox"/>	A 25-year old female
<input type="checkbox"/>	A 30-year old male



Overall score: 0%

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Question 240 of 280



A 72 year old male is brought into A&E by ambulance after a third episode of limb jerking in 72 hours was witnessed by his wife. As you arrive, the patient becomes increasingly unresponsive and you witness small amplitude jerking of all four limbs. While the resus nurse obtains midazolam two minutes into his seizure, you note his eyes are closed tight and it is not possible to forcefully open them in order to check papillary reflexes. The amplitude of his limb jerking also become increasingly large. You note blood on his tongue and urinary incontinence. He does not suffer head or limb injury. His seizure spontaneously terminate before any medication is administered about 6 minutes after its onset. He becomes increasingly responsive about 2 minutes after the end of limb jerking and appears tearful. He is extremely apologetic for the fuss he has caused. What is the diagnosis?

	Partial seizure
	Absence seizure
	Secondary generalised seizure
	Pseudoseizure
	Myoclonic seizure

Dashboard

Overall score: 0%

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Question 240 of 280



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	Partial seizure
	Absence seizure
	Secondary generalised seizure
	Pseudoseizure
	Myoclonic seizure

Dashboard

Overall score: 0%

1 -

Question 241 of 280

□ □

A 27-year-old woman comes for review. She is having problems with increasingly frequent migraine attacks. These occur throughout her menstrual cycle and have no relation to her periods. She has tried a combination of paracetamol and ibuprofen to try and control the attacks but this seems to have had a limited effect. Her current medication includes paracetamol and ibuprofen as required and Cerazette (a progestogen-only pill).

What is the most appropriate medication to try and reduce the frequency of her migraine attacks?

	Propranolol
	Zolmitriptan
	Topiramate
	Amitriptyline
	Switch Cerazette to a combined oral contraceptive pill

Dashboard

Overall score: 0%

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Question 241 of 280

□ □

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	Topiramate
	Amitriptyline
	Switch Cerazette to a combined oral contraceptive pill

Dashboard

Overall score: **0%**

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Question 242 of 280

□ □

You are the medical registrar on call. While reviewing another patient, you notice an 82-year-old female inpatient on the same ward, currently treated for community-acquired pneumonia sitting in a chair. You notice a persistent movement of her head, in a nodding motion, associated with a tremor of both hands, worse in the left than the right. Reading through her notes, she has previously been treated for epilepsy and was started on oral phenytoin by her GP 4 months ago. On examination, the hand tremor appears to worsen when her arms are outstretched. She performs finger-nose dysmetria testing without difficulty with no speech. She demonstrates no cogwheeling. The patient appears unconcerned by the symptoms 'I have learned to live with it for years doctors!' she tells you. What is the most likely diagnosis?

	Tremor-predominant Parkinson's disease
	Phenytoin induced cerebellar tremor
	Essential tremor
	Physiological tremor
	Orthostatic tremor

Dashboard

Overall score: 0%

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Question 242 of 280

□ □

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	Phenytoin induced cerebellar tremor
	Essential tremor
	Physiological tremor
	Orthostatic tremor

Dashboard

Overall score: **0%**

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Question 243 of 280

A 32-year-old man had a compressive pituitary macroadenoma surgically removed in France 4 weeks ago and has been on pituitary hormone replacement since, including growth hormone. Surgery was uncomplicated and he initially made a good recovery. He has no other past medical history. He has now developed, over the last 1-2 weeks, poor balance, with a broad-based gait. He has also become extremely forgetful. On examination, he has an ataxic gait and you also observe occasional myoclonic limb movements. His MMSE score is 22/30. Clinical examination is otherwise unremarkable, as are routine blood investigations. Given the likely diagnosis, what might you expect to find on his MRI brain?

	Areas of demyelination in the cerebellum
	An area of high T2 signal in the right middle cerebral artery territory with restricted diffusion on diffusion-weighted sequences
	High T2 signal in the posterior thalamus
	Leptomeningeal enhancement
	Loss of grey-white matter differentiation

Dashboard

Overall score: 0%

1 -

Question 243 of 280

A 32-year-old man had a compressive pituitary macroadenoma surgically removed in France 4 weeks ago and has been on pituitary hormone replacement since, including growth hormone. Surgery was uncomplicated and he initially made a good recovery. He has no other past medical history. He has now developed, over the last 1-2 weeks, poor balance, with a broad-based gait. He has also become extremely forgetful. On examination, he has an ataxic gait and you also observe occasional myoclonic limb movements. His MMSE score is 22/30. Clinical examination is otherwise unremarkable, as are routine blood investigations. Given the likely diagnosis, what might you expect to find on his MRI brain?

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	High T2 signal in the posterior thalamus
	Leptomeningeal enhancement
	Loss of grey-white matter differentiation

Dashboard

Overall score: **0%**

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Question 244 of 280

□ □

A 64 year old gentleman presented to the neurology clinic for review. He had a history of motor neuron disease which had been progressing over the past five years. He had significant weakness in all of his limbs, and was dependent on a wheelchair. He took baclofen for relief of muscle spasms, and amitriptyline to reduce salivation, but was otherwise not on any medication. He mentions that in addition to his weakness continuing to progress he has been suffering from headaches in the morning. These were generalised and described as throbbing in nature. He also reported not feeling refreshed after sleep.

On examination there is generalised muscle wasting, with fasciculations in all limbs. Reflexes were absent, other than bilateral extensor plantar responses. Eye movements and fundoscopy are normal. Palatal movements were normal, and there was no significant dysphagia on swallow test.

Which intervention is most likely to confer the greatest survival benefit in this patient?

	Riluzole
	Feeding via percutaneous endoscopic gastrostomy
	Non-invasive ventilation
	Home oxygen therapy
	Prophylactic antibiotics

Dashboard

Overall score: 0%

1 -

Question 244 of 280

□ □

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	Feeding via percutaneous endoscopic gastrostomy
	Non-invasive ventilation
	Home oxygen therapy
	Prophylactic antibiotics

Dashboard

Overall score: **0%**

1 -

Question 245 of 280

□ □

You review an 80-year old retired teacher in your clinic. She has been complaining of numbness on her arms and difficulty walking. On examination you find she has reduced sensation lateral aspect of her arms and forearms in the anatomical position. She has no wasting on the muscles of her hands. She has reduced biceps and supinator reflexes and reduced power bilaterally.

When she gets up to go you notice she has a scissoring gait which is wide based. You ask her to close her eyes and she is unable to stand still without support.

She lives on her own and usually is independent, although recently she has been struggling to cope. She has a background of hypertension and high cholesterol.

What is the most appropriate investigation to diagnose this lady?

	Cervical myelography
	Cervical X-Ray
	Nerve conduction studies
	Nerve biopsy
	MRI of the cervical cord

Dashboard

Overall score: 0%

1 -

Question 245 of 280

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<input type="radio"/>	Cervical myelography
<input type="radio"/>	Cervical X-Ray
<input type="radio"/>	Nerve conduction studies
<input type="radio"/>	Nerve biopsy
<input checked="" type="radio"/>	MRI of the cervical cord

Dashboard

Overall score: **0%**

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Question 246 of 280

□ □

A 78-year-old male with a background of atrial fibrillation, ischaemic heart disease, hypertension is brought to hospital by his wife who is concerned about a recent deterioration in his health. For the last few weeks his wife has noticed that the patient has been more unsteady on his feet which has resulted in falls around the house. His wife also informs you that the patient has been more forgetful and less interested in his hobbies than usual. When you ask the patient about his symptoms, his main concern is that he has recently developed problems with urinary incontinence which he finds embarrassing.

As part of the investigation into this patient's condition, a CT scan of the patient's head is requested. What is the most likely finding?

	Diffuse cerebral atrophy with enlargement of cortical sulci and ventricles
	A hyper-dense bi-convex extra-axial collection beneath the squamous part of the temporal bone
	Small areas of low density in the distribution of the middle cerebral artery, suggestive of old lacunar infarcts
	A concave-shaped extra-axial collection with increased attenuation
	Enlarged third and lateral ventricles, disproportionate to the enlargement of the cortical sulci

Dashboard

Overall score: 0%

1 -

Question 246 of 280

□ □

A 78-year-old male with a background of atrial fibrillation, ischaemic heart disease, hypertension is brought to hospital by his wife who is concerned about a recent deterioration in his health. For the last few weeks his wife has noticed that the patient has been more unsteady on his feet which has resulted in falls around the house. His wife also informs you that the patient has been more forgetful and less interested in his hobbies than usual. When you ask the patient about his symptoms, his main concern is that he has recently developed problems with urinary incontinence which he finds embarrassing.

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	Enlarged third and lateral ventricles, disproportionate to the enlargement of the cortical sulci

Dashboard

Overall score: **0%**

1 -

Question 247 of 280

□ □

A 62 year old Afro-Caribbean female is brought to the Emergency Department by husband after a 3 day history of unusual, odd behaviour at home. The family had hosted a dinner party that evening and the patient was reported to have been very disinhibited, agitated and describing hallucinations around her guests. In the past 3 weeks, she had two episodes of generalised seizures witnessed by her husband, each lasting for up to 5 minutes before spontaneously terminating, associated with urinary incontinence and tongue biting. She has no history of epilepsy and is not on any regular medications, but was diagnosed with ovarian teratoma two years ago. On examination, she has no focal neurology but you note a dystonic orofacial movement disorder. A CT head was unremarkable, with no acute infarct, haemorrhage or space occupying lesion demonstrated.

Which investigation is most likely to produce the diagnosis?

	MRI head
	Lumbar puncture
	Anti-NMDA receptor antibodies
	Anti-MuSK antibodies
	Anti-GM1 antibodies

Dashboard

Overall score: 0%

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□ Question 247 of 280

□ □

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Dashboard

Overall score: **0%****1** -

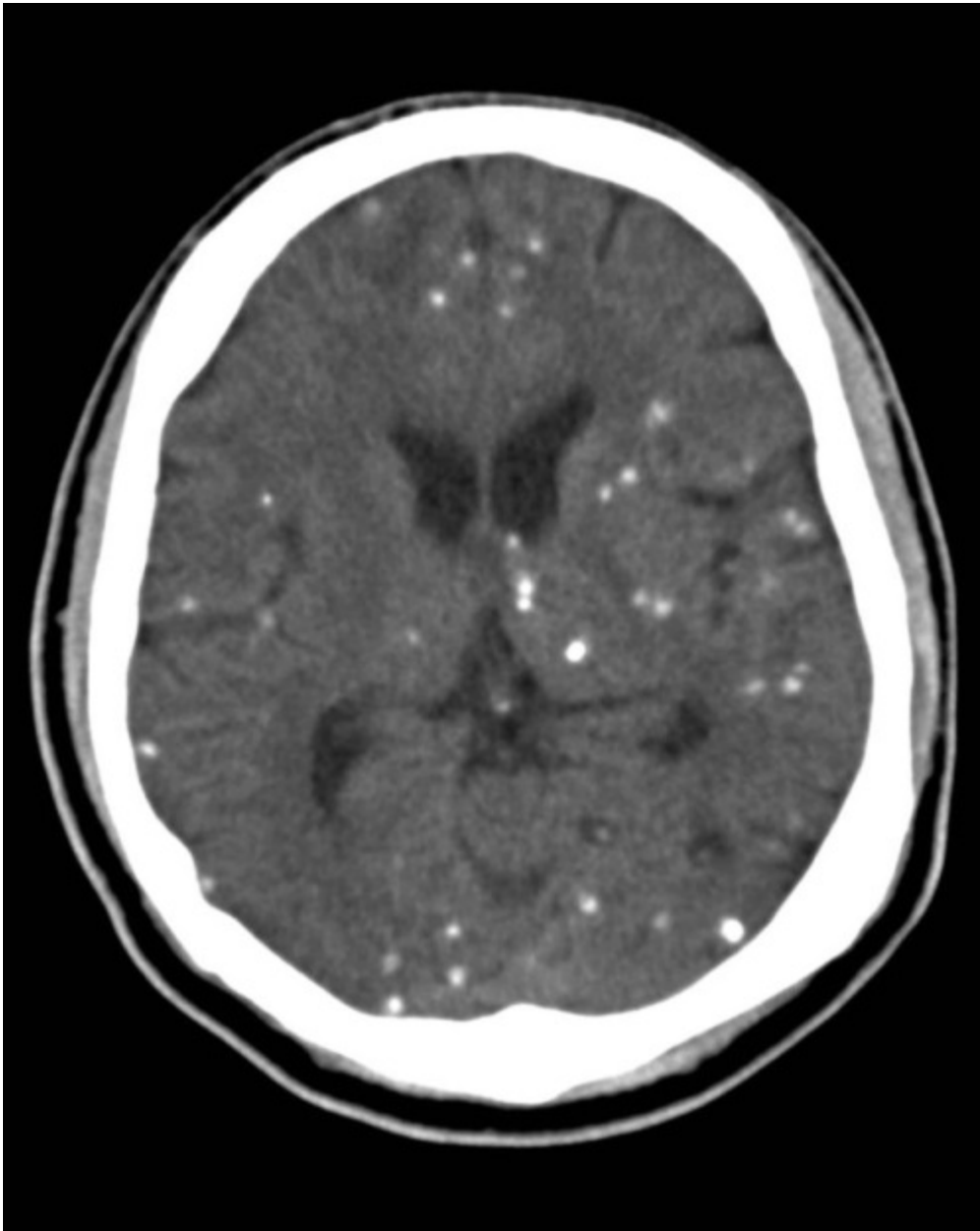
□ Question 248 of 280

□ □

A 33-year-old man who has recently emigrated from Bolivia is referred to neurology after the recent onset of seizures. These are generalised in nature and are now occurring on a daily basis. His friend reports that he has been complaining of headaches recently and has also been acting out of character.

He has fit whilst leaving the outpatients department. This terminates spontaneously and he is transferred to the Emergency Department.

A CT scan is requested:



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What is the most likely diagnosis?

	Cerebral toxoplasmosis
	Cerebral cryptococcosis
	Neurosarcoidosis
	Tuberculous meningitis
	Neurocysticercosis

Overall score: **0%**

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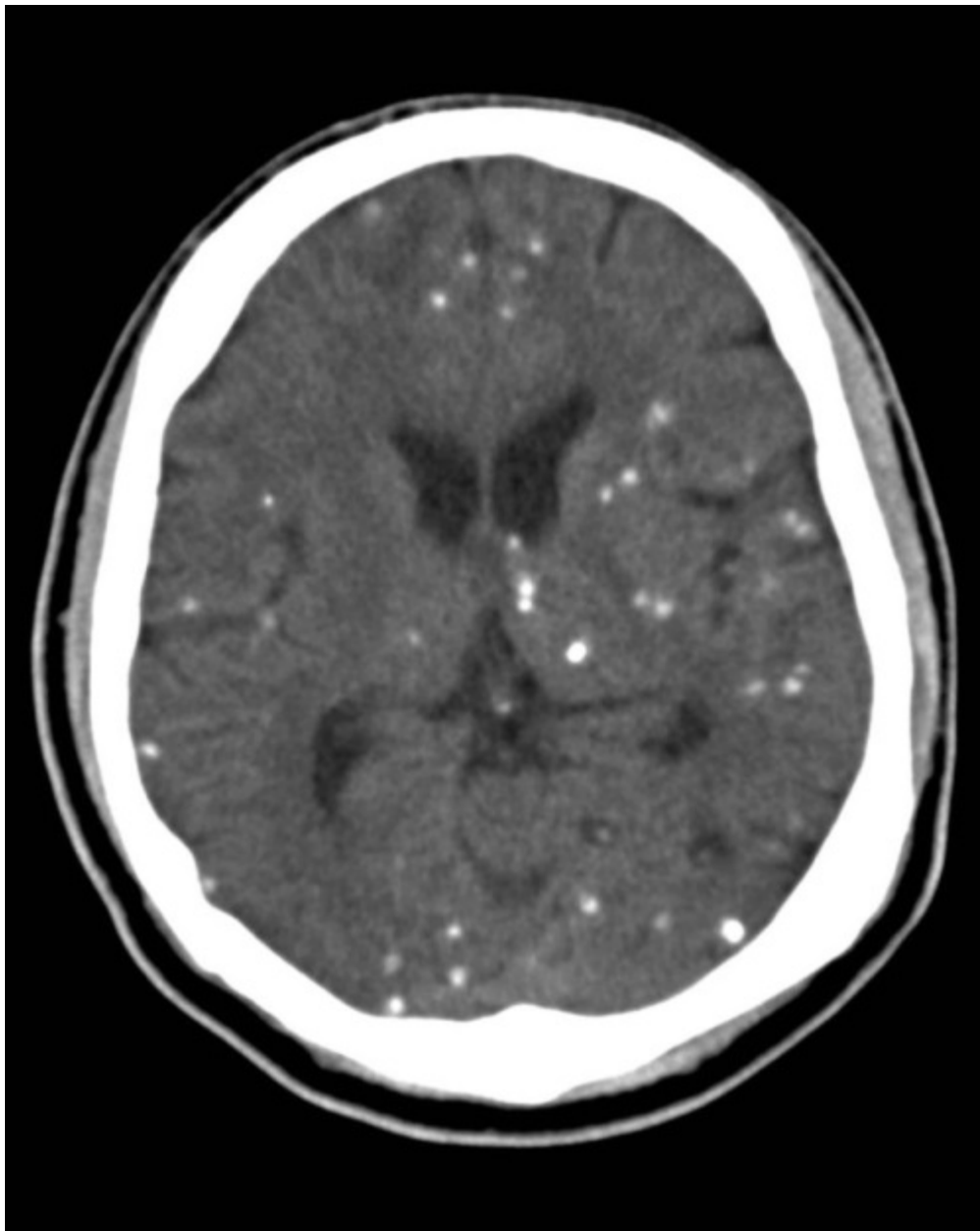
□ Question 248 of 280

□ □

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What is the most likely diagnosis?

	Cerebral toxoplasmosis
	Cerebral cryptococcosis
	Neurosarcoidosis
	Tuberculous meningitis
	Neurocysticercosis

Dashboard

Overall score: **0%**

1 -

Question 249 of 280

□ □

A 36-year-old female presents to clinic with transient visual loss. She reports three episodes over the last few months where her 'turns black' in both eyes despite being alert. This lasts for a few seconds and is then followed by a unilateral throbbing headache associated with nausea and phonophobia. It is worse on exertion and lasts for a couple of days. On examination her visual acuity is 20/20 bilaterally, her visual fields are normal and fundoscopy is unremarkable.

What is the most likely diagnosis?

	Transient ischaemic attack
	Amaurosis fugax
	Anterior ischaemic optic neuropathy
	Temporal arteritis
	Migraine with aura

Dashboard

Overall score: 0%

1 -

Question 249 of 280

□ □

A 36-year-old female presents to clinic with transient visual loss. She reports three episodes over the last few months where her 'turns black' in both eyes despite being alert. This lasts for a few seconds and is then followed by a unilateral throbbing headache associated with nausea and phonophobia. It is worse on exertion and lasts for a couple of days. On examination her visual acuity is 20/20 bilaterally, her visual fields are normal and fundoscopy is unremarkable.

What is the most likely diagnosis?

	Transient ischaemic attack
	Amaurosis fugax
	Anterior ischaemic optic neuropathy
	Temporal arteritis
	Migraine with aura

Dashboard

Overall score: **0%**

1 -

Question 250 of 280

□ □

A 23 year old white Caucasian left-handed male presents with a 24 hour history of slurred speech. He is a 'frequent flyer' in the Emergency Department with repeated admissions and known is a known user of intravenous drugs and alcohol. His past medical history includes depression and previously treated in adolescence for functional neurological symptoms. He denies having had a drink for the past 2 weeks but used intravenous cocaine yesterday.

On examination, he is obviously unkempt and a lack of prominent veins. There is an old abscess scar over his right femoral crease. His speech is markedly slurred but he remains orientated to time and place. You also note significant loss of forehead creasing and facial weakness on both sides of his face with normal facial sensation. In addition, his power is 4-/5 in shoulder abduction, shoulder adduction, hip flexion and hip extension, with 5/5 power on all other movements. Reflexes were present in biceps, supinator, patella and ankle, with absent triceps reflex. Both plantar reflexes were downgoing. Sensation to cotton wool, proprioception and pin prick was normal, with the patient reporting no pain.

What is the diagnosis?

	Heavy metal intoxication
	Guillain Barre syndrome
	Botulism
	Chronic inflammatory demyelinating polyneuropathy (CIDP)
	Myasthenia gravis

Dashboard

Overall score: 0%

1 -

Question 250 of 280

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What is the diagnosis?

	Heavy metal intoxication
	Guillain Barre syndrome
	Botulism
	Chronic inflammatory demyelinating polyneuropathy (CIDP)
	Myasthenia gravis

Dashboard

Overall score: **0%**

1 -

Question 251 of 280

□ □

A 48-year-old woman presented to the emergency department with a severe headache. Symptoms had started early that day while the patient had been walking around her office with the headache reaching maximal intensity within a few minutes. The pain was felt across the entirety of the patient's head and was much improved when she lay down flat. There were no associated symptoms and the patient had been constitutionally well in the preceding days.

The patient had no past medical history and was nulliparous. She was a non-smoker who consumed 15 units of alcohol per week.

Clinical examination demonstrated no evidence of focal neurological deficit and no signs of meningism. Simple analgesia given in the emergency department had limited impact on the patient's headache.

CT brain with venogram: no evidence of intra-axial or extra-axial bleeding; no space occupying lesion; no hydrocephalus; no evidence of venous sinus thrombosis

Lumbar puncture: opening pressure 5 mmHg; red cells 8 mm³; white cells 1 / mm³; no xanthochromia

What is the next best investigation to confirm the likely diagnosis?

	Digital subtraction myelography
	Cerebral angiography
	CT brain with contrast
	MRI whole spine with STIR
	MRI brain with gadolinium

Dashboard

Overall score: 0%

Question 251 of 280

□ □

A 48-year-old woman presented to the emergency department with a severe headache. Symptoms had started early that day while the patient had been walking around her office with the headache reaching maximal intensity within a few minutes. The pain was felt across the entirety of the patient's head and was much improved when she lay down flat. There were no associated symptoms and the patient had been constitutionally well in the preceding days.

The patient had no past medical history and was nulliparous. She was a non-smoker who consumed 15 units of alcohol per week.

Clinical examination demonstrated no evidence of focal neurological deficit and no signs of meningism. Simple analgesia given in the emergency department had limited impact on the patient's headache.

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Lumbar puncture: opening pressure 5 mmHg; red cells 8 mm³; white cells 1 / mm³; no xanthochromia

What is the next best investigation to confirm the likely diagnosis?

	Digital subtraction myelography
	Cerebral angiography
	CT brain with contrast
	MRI whole spine with STIR
	MRI brain with gadolinium

Dashboard

Overall score: **0%**

Question 252 of 280

You have been referred a 45-year-old man by the Accident and Emergency doctors with a severe headache. The headache woke him up at 3am, and he describes it as the worst headache he's ever had. He has had two episodes like this over the past three days that have followed a very similar pattern, each lasting around 70 minutes before going. The pain is mainly around the left eye and temple and is sharp in nature. On examining him you note that his left eye is watering and swollen, and there's some redness and mild bruising just above the eye. When you ask him about this bruising he says that the pain was so bad he bashed his head against the fridge door to try and help take it away.

How would you treat his headache?

	Oral triptan
	Indometacin
	100% oxygen and indometacin
	100% oxygen
	100% oxygen and nasal triptan

Dashboard

Overall score: 0%

1 -

Question 252 of 280



You have been referred a 45-year-old man by the Accident and Emergency doctors with a severe headache. The headache woke him up at 3am, and he describes it as the worst headache he's ever had. He has had two episodes like this over the past three days that have followed a very similar pattern, each lasting around 70 minutes before going. The pain is mainly around the left eye and temple and is sharp in nature. On examining him you note that his left eye is watering and swollen, and there's some redness and mild bruising just above the eye. When you ask him about this bruising he says that the pain was so bad he bashed his head against the fridge door to try and help take it away.

How would you treat his headache?

	Oral triptan
	Indometacin
	100% oxygen and indometacin
	100% oxygen
	100% oxygen and nasal triptan

Dashboard

Overall score: 0%

1 -

Question 253 of 280

□ □

A 77-year-old female has two episodes of weakness affecting the left arm and leg each lasting ten minutes, both within the space of 2 days. She did not attend the emergency department after the first episode. Her only significant past medical history is hypertension, for which she takes amlodipine 5mg OD. She has experienced one similar episode to this one year ago but did not seek medical attention. Her daughter is present who informs you that the patient has lost a significant amount of weight in the last year. On further questioning, she reports some haemoptysis lately. Her blood pressure in the department was 170/90mmHg initially.

Her bloods reveal

Hb	11.5 g/dl
Platelets	149 * 10 ⁹ /l
WBC	13.1 * 10 ⁹ /l

Na ⁺	132 mmol/l
K ⁺	5.3 mmol/l
Creatinine	111 µmol/l
CRP	15 mg/l

ECG: Sinus tachycardia, rate 104/min

What is the most appropriate management for this lady?

	Aspirin + transient ischaemic attack (TIA) clinic referral
	Aspirin and dipyridamole + TIA clinic referral
	Aspirin and clopidogrel + TIA clinic referral
	Admit for CT head + aspirin

	Reassure and discharge
--	------------------------

Dashboard

Overall score: 0%

1 -

Question 253 of 280

□ □

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	Aspirin + transient ischaemic attack (TIA) clinic referral
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	Aspirin and clopidogrel + TIA clinic referral
	Admit for CT head + aspirin

	Reassure and discharge

Dashboard

Overall score: **0%**
1 -

□ Question 254 of 280



A 70-year-old man with a history of hypertension and benign prostatic hypertrophy is brought in by ambulance after a fall. He reports he felt dizzy after standing up from his arm chair, stumbled and tripped over his cat. His wife, who witnessed the fall, reports that he then hit his head on the coffee table a lost consciousness for around 1 minute.

She describes no abnormal movements or incontinence. On regaining consciousness he was oriented immediately. He remembers regaining consciousness. He has no headache, dizziness, nausea or vomiting.

On examination, he has a small laceration on his forehead. His pupils were equal and reactive to light. He had no focal neurological deficits. He was a 15 on the Glasgow Coma Scale. His abbreviated mental test score was 10/10.

ECG: Sinus rhythm. 70 beats per minute. No T wave or ST segment changes.

Blood pressure (lying): 135/75 mmHg

Blood pressure (standing): 110/60 mmHg

Haemoglobin	135 g/dl
Troponin T	1 ng/L

Urine dip: trace of protein

What is the most appropriate course of action?

	Admit for CT head within 1 hour
	Admit for CT head within 8 hours
	Admit for CT head within 24 hours
	Discharge to return for CT head next day
	Discharge with outpatient follow-up, no imaging required

Dashboard

Overall score: **0%**

1 -

□ Question 254 of 280



A 70-year-old man with a history of hypertension and benign prostatic hypertrophy is brought in by ambulance after a fall. He reports he felt dizzy after standing up from his arm chair, stumbled and tripped over his cat. His wife, who witnessed the fall, reports that he then hit his head on the coffee table a lost consciousness for around 1 minute.

She describes no abnormal movements or incontinence. On regaining consciousness he was oriented immediately. He remembers regaining consciousness. He has no headache, dizziness, nausea or vomiting.

On examination, he has a small laceration on his forehead. His pupils were equal and reactive to light. He had no focal neurological deficits. He was a 15 on the Glasgow Coma Scale. His abbreviated mental test score was 10/10.

ECG: Sinus rhythm. 70 beats per minute. No T wave or ST segment changes.

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Blood pressure (standing): 110/60 mmHg

Haemoglobin	135 g/dl
Troponin T	1 ng/L

Urine dip: trace of protein

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Dashboard

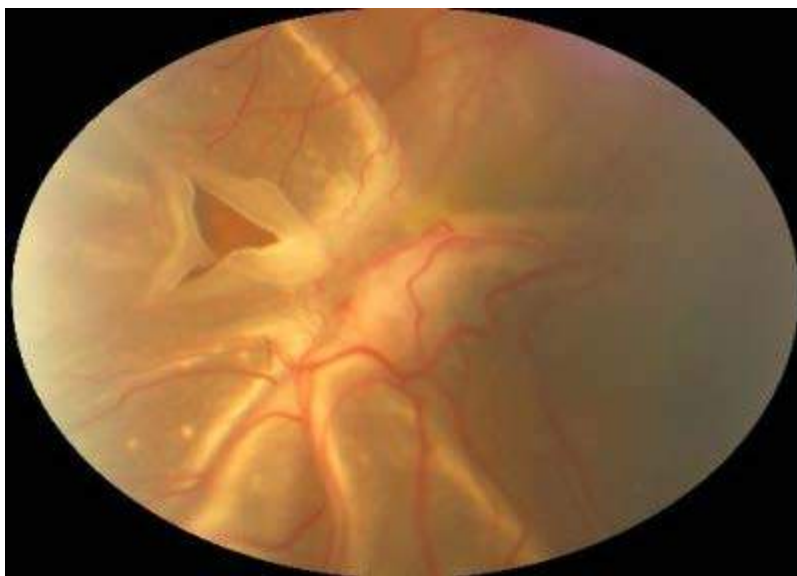
Overall score: **0%**

1 -

□ Question 255 of 280

□ □

A woman presents with reduced vision in her right eye. She is unsure when it started but can now only make out hand movements with the right eye. Fundoscopy of the affected eye shows the following:



What is the diagnosis?

<input type="checkbox"/>	Penetrating foreign body
<input type="checkbox"/>	Myelinated optic disc
<input type="checkbox"/>	Papilloedema
<input type="checkbox"/>	Choroidoretinitis
<input type="checkbox"/>	Retinal detachment

Overall score: **0%**

1 -

□ Question 255 of 280

□ □

A woman presents with reduced vision in her right eye. She is unsure when it started but can now only make out hand movements with the right eye. Fundoscopy of the affected eye shows the following:



What is the diagnosis?

	Penetrating foreign body
	Myelinated optic disc
	Papilloedema
	Choroidoretinitis
	Retinal detachment

Dashboard

Overall score: **0%**

1 -

□ Question 256 of 280



A 46-year-old white Caucasian female presents to the Emergency Department after waking up unable to walk and complains about problems with vision in her right eye. The patient says she is normally extremely healthy and the only time she has ever visited her GP was when she had an episode of diarrhoea and vomiting about a week ago. She is understandably distressed as she has not experienced any symptoms before and has not been previously diagnosed with any medical conditions. She has no drug or family history. Nursing staff report to you that she has been given a pad on her bed as she is incontinent of urine, which she is tearfully embarrassed by.

On examination of her cranial nerves, a right relative afferent papillary defect is noted. Visual acuity and colour vision are 6/6 with 17/17 Ishihara plates on the left, 6/60 with 0/17 Ishihara plates on the right. She reports no diplopia with a full range of eye movements and normal facial sensation. Facial movements are normal. Fundoscopy was unremarkable. Examination of the patient's upper and lower limb power demonstrated normal tone with 2-/5 power on the left arm and leg in all movements; and 4-/5 all movements in right arm and leg. There is a patchy loss of sensation to cotton wool on right lateral wrist and anterior aspect left lateral shin. Both plantars are upgoing. Reflexes are brisk at knee and ankles bilaterally. Anal tone and saddle sensation are intact. The patient's cognitive state is normal on superficial examination.

An urgent MRI head and whole spine demonstrates abnormal high signal in the cervical cord from C3 to C7. Her blood tests were mislabelled and hence unavailable. A lumbar puncture was performed with the following results:

WCC	12 mm/ ³
RBC	<1 mm/ ³
Protein	0.9 g/l
Glucose	5.2 mmol/l (10.2 mmol/l serum)
Oligoclonal bands	awaited
Viral PCR	awaited

What is the most likely diagnosis?

	Idiopathic intracranial hypertension
	Transverse myelitis

	Miller-Fisher syndrome
	Multiple sclerosis
	Devic's disease

Dashboard

Overall score: **0%**
1 -

Question 256 of 280



A 46-year-old white Caucasian female presents to the Emergency Department after waking up unable to walk and complains about problems with vision in her right eye. The patient says she is normally extremely healthy and the only time she has ever visited her GP was when she had an episode of diarrhoea and vomiting about a week ago. She is understandably distressed as she has not experienced any symptoms before and has not been previously diagnosed with any medical conditions. She has no drug or family history. Nursing staff report to you that she has been given a pad on her bed as she is incontinent of urine, which she is tearfully embarrassed by.

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	Idiopathic intracranial hypertension
	Transverse myelitis

	Miller-Fisher syndrome
	Multiple sclerosis
	Devic's disease

Dashboard

Overall score: **0%**
1 -

Question 257 of 280

A 45-year-old male presents with ascending weakness. He first noticed that he was tripping over more easily, but now has trouble getting out of a chair. He feels otherwise well. Of note, he did have moderate diarrhoea which had completely resolved a week prior to developing this weakness.

On examination, he is haemodynamically stable with a heart rate of 68 beats per minute and a blood pressure of 135/80 mmHg. His respiratory rate is 18 breaths per minute. He has reduced power in ankle plantar and dorsiflexion bilaterally, absent ankle jerks and reduced knee jerks. His plantar responses are downwards.

Acutely, which of the following results will most assist you with a diagnosis?

	MRI showing inflammation of the lumbo-sacral spinal cord
	Elevated white cell count on cerebrospinal fluid (CSF) analysis
	Abnormal nerve conduction tests of the lower limbs
	Elevated CSF protein
	Raised erythrocyte sedimentation rate (ESR)

Dashboard

Overall score: 0%

1 -

Question 257 of 280

□ □

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	MRI showing inflammation of the lumbo-sacral spinal cord
	Elevated white cell count on cerebrospinal fluid (CSF) analysis
	Abnormal nerve conduction tests of the lower limbs
	Elevated CSF protein
	Raised erythrocyte sedimentation rate (ESR)

Dashboard

Overall score: **0%**

1 -

Question 258 of 280

□ □

A 47-year-old man is admitted to the Medical Assessment Unit with a pneumonia. He has had a cough for the last week which has not settled with amoxicillin from his GP.

His past medical history includes alcoholic liver disease with a hepatic transplant 6 months previously, hypertension and diet-controlled type II diabetes. He has remained abstinent from alcohol for the last 18 months and is a lifelong non-smoker. His medications are ramipril, simvastatin and tacrolimus.

On admission he has a temperature of 38.1 °C and oxygen saturations of 94% on air. His heart rate is 110 beats per minute and blood pressure is 105/65 mmHg. On auscultation he has left basal crepitations and chest x-ray confirms a left lower lobe pneumonia.

He is started on intravenous fluids, 2 litres oxygen via nasal cannulae, co-amoxiclav and clarithromycin. His statin is withheld.

2 days later, the ward team are asked to review the patient as he has developed limb twitching. During the assessment he has a generalised tonic-clonic seizure which requires lorazepam to terminate it.

Which investigation is most likely to reveal the cause for his seizures?

	Blood cultures
	CT head
	Electrolytes
	Lumbar puncture
	Tacrolimus level

Overall score: **0%**

1 -

Question 258 of 280

□ □

A 47-year-old man is admitted to the Medical Assessment Unit with a pneumonia. He has had a cough for the last week which has not settled with amoxicillin from his GP.

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	Blood cultures
	CT head
	Electrolytes
	Lumbar puncture
	Tacrolimus level

Overall score: **0%**

1 -

Question 259 of 280



A 34-year-old woman is referred to the neurology clinic for a 6 month history of progressively worsening headaches. The headaches tend to be occipital in nature and are worsened by coughing.

Neurological examination is unremarkable.

Her MRI is shown below:



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What finding is shown on the MRI?

	Brainstem cavernous angioma
	Pituitary adenoma
	Arnold-Chiari malformation
	Arachnoid cyst
	Spina bifida

Dashboard

Overall score: 0%

1 -

Question 259 of 280



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	Arachnoid cyst
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Dashboard

Overall score: **0%**

1 -

□ Question 259 of 280

□ □

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Her MRI is shown below:



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What finding is shown on the MRI?

	Brainstem cavernous angioma
	Pituitary adenoma
	Arnold-Chiari malformation
	Arachnoid cyst
	Spina bifida

Dashboard

Overall score: 0%

1 -



Question 260 of 280



A 58-year-old male is brought into your outpatient clinic by his wife. The patient does not understand why he needs to see a doctor and just wants to get back to work. However, she reports a rather vague history of increasing withdrawal from social interactions and odd repetition of 'catch phrases' over the past 9 months. In addition, she feels his behaviour has changed and is very inappropriate when meeting up with friends, once urinating at the table while having dinner. Last week, he gave her a grave headstone for her birthday, saying 'it is nice to be well-prepared!' While she was understandably upset, he was mystified as to why his well thought out gift might have caused distress. On examination, he continues to repeat the phrase 'Whats up doc?!' at a regular interval, disturbing your history taking. You finally complete a mini-mental test examination, scoring 27/30. What is the most likely diagnosis?

	No medical diagnosis
	Borderline personality disorder
	Bipolar disorder
	Schizophrenia
	Frontotemporal dementia

Dashboard

Overall score: 0%

1 -

Question 260 of 280

A 58-year-old male is brought into your outpatient clinic by his wife. The patient does not understand why he needs to see a doctor and just wants to get back to work. However, she reports a rather vague history of increasing withdrawal from social interactions and odd repetition of 'catch phrases' over the past 9 months. In addition, she feels his behaviour has changed and is very inappropriate when meeting up with friends, once urinating at the table while having dinner. Last week, he gave her a grave headstone for her birthday, saying 'it is nice to be well-prepared!' While she was understandably upset, he was mystified as to why his well thought out gift might have caused distress. On examination, he continues to repeat the phrase 'Whats up doc?!' at a regular interval, disturbing your history taking. You finally complete a mini-mental test examination, scoring 27/30. What is the most likely diagnosis?

	No medical diagnosis
	Borderline personality disorder
	Bipolar disorder
	Schizophrenia
	Frontotemporal dementia

Dashboard

Overall score: 0%

1 -

Question 261 of 280

□ □

A previously well 69 year old patient presents to the A+E department with a sudden onset of weakness. This was noticed by his wife who immediately called 999.

Neurological examination:

CN I-IV normal

CN V ophthalmic and maxillary divisions normal with reduced sensation in mandibular division on left side

CN VI normal

CN VII reduced power to left lower facial musculature

CN VIII normal

CN IX, X and XII weakness in swallow

CN XI weakness on turning the head to the left.

Right upper limb normal tone, power 5/5, normal reflexes and sensation. Normal finger pointing.

Left upper limb markedly increased tone, power 1/5 globally in all muscle groups, brisk reflexes and reduced sensation to light touch. Unable to move limb to determine ability to finger pointing.

Right lower limb normal tone, power 5/5, normal reflexes and sensation. Heel-knee-shin test normal.

Left lower limb slightly increased tone, power 3/5 globally, brisk reflexes and reduced sensations. Reduced ability to heel-knee-shin test when compared to right side.

Gait - not assessed due to weakness.

Romberg's test - not done due to weakness.

	Left middle cerebral artery
	Right middle cerebral artery
	Posterior cerebral artery
	Left anterior cerebral artery

Dashboard

Overall score: **0%**

1 -

Question 261 of 280

□ □

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Gait - not assessed due to weakness.

Romberg's test - not done due to weakness.

	Left middle cerebral artery
	Right middle cerebral artery
	Posterior cerebral artery
	Left anterior cerebral artery

Dashboard

Overall score: 0%

1 -

□ Question 262 of 280

□ □

A 33-year-old woman presents to the Emergency Department with a severe headache. She describes falling to the ground whilst walking to work and since having a severe occipital headache. Her GCS is 15/15 and her vital signs are stable, other than a low grade pyrexia of 37.5°C. Her headache fails to improve with analgesia and a CT head with contrast is performed:



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What does the scan show?

--	--

	Extradural haematoma
	Brain contusion
	Subdural haematoma
	Meningioma
	Subarachnoid haemorrhage

Dashboard

Overall score: **0%**

1 -

□ Question 262 of 280

□ □

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	Extradural haematoma
	Brain contusion
	Subdural haematoma
	Meningioma
	Subarachnoid haemorrhage

Dashboard

Overall score: **0%**
1 -

□ Question 263 of 280

□ □

A 27 year-old woman attends the neurology clinic complaining of headache and visual disturbance. She has recently immigrated from Ghana. Her symptoms began approximately one month ago, shortly after the birth of her first child. She experiences dull frontal headache which is worst in the mornings and on coughing or straining, as well as transient episodes of 'darkening' of her vision. She saw a doctor in Ghana and was diagnosed with idiopathic intracranial hypertension. She is taking acetazolamide 250mg BD and no other medication.

On examination the visual fields are markedly constricted and the right blind spot is enlarged. Fundoscopy shows bilateral papilloedema worse on the right. The remainder of the neurological examination is unremarkable. BMI is 18 kg/m².

Plain computed tomography of the brain is normal.

Incidentally as she is leaving the clinic she mentions that she has also been experiencing pins and needles in the hands and feet.

What is the best course of action?

	Increase dose of acetazolamide
	Request nerve conduction studies
	Organise for therapeutic lumbar puncture
	Refer to neurosurgeons for consideration of ventriculo-peritoneal shunting
	Request CT venography

Dashboard

Overall score: 0%

1 -

□ Question 263 of 280

□ □

A 27 year-old woman attends the neurology clinic complaining of headache and visual disturbance. She has recently immigrated from Ghana. Her symptoms began approximately one month ago, shortly after the birth of her first child. She experiences dull frontal headache which is worst in the mornings and on coughing or straining, as well as transient episodes of 'darkening' of her vision. She saw a doctor in Ghana and was diagnosed with idiopathic intracranial hypertension. She is taking acetazolamide 250mg BD and no other medication.

On examination the visual fields are markedly constricted and the right blind spot is enlarged. Fundoscopy shows bilateral papilloedema worse on the right. The remainder of the neurological examination is unremarkable. BMI is 18 kg/m².

Plain computed tomography of the brain is normal.

Incidentally as she is leaving the clinic she mentions that she has also been experiencing pins and needles in the hands and feet.

What is the best course of action?

	Increase dose of acetazolamide
	Request nerve conduction studies
	Organise for therapeutic lumbar puncture
	Refer to neurosurgeons for consideration of ventriculo-peritoneal shunting
	Request CT venography

Dashboard

Overall score: 0%

1 -

Question 264 of 280

□ □

A 32 year old female is seen in neurology clinic due to a 4 month history of headaches. She described having headaches most days on waking up, which were throbbing in nature. She found that they eased off after mobilising, and that coughing made them worse. She reported a couple of episodes of blurred vision on waking, but no nausea or vomiting. Her general practitioner arranged for an outpatient magnetic resonance head scan which was normal. Her body mass index (BMI) had been 27 kg/m², but on advice from her general practitioner she had lost weight, and her BMI was now 23 kg/m². She was not on any regular medications, other than paracetamol and ibuprofen which she had been using regularly for her headaches.

There was no focal neurological deficit on examination, and her visual acuity was normal. On fundoscopy there was a mild degree of papilloedema. Blood pressure was 125/82mmHg. Blood tests were unremarkable.

What is the most appropriate next step in management?

	Lumbar-peritoneal shunt
	Optic nerve fenestration
	Cessation of paracetamol and ibuprofen
	Acetazolamide
	Sumatriptan

Dashboard

Overall score: 0%

1 -

□ Question 264 of 280

□ □

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	Optic nerve fenestration
	Cessation of paracetamol and ibuprofen
	Acetazolamide
	Sumatriptan

Dashboard

Overall score: **0%**

1 -

Question 265 of 280

□ □

An 82-year-old female presents to Parkinson's disease clinic with increasing number of episodes when she is unable to move at all, each lasting for around 20 minutes and up to 4 times a day. She was diagnosed with Parkinson's disease five years ago and has since been taking Sinemet 125 only. Which of the therapies is most appropriate to reduce motor fluctuations?

	Entacapone
	Deep brain stimulation (DBS) of globus pallidus
	Reducing L-dopa dose
	Change to ropinirole
	Change to selegiline

Dashboard

Overall score: **0%**

1 -

Question 265 of 280

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	Change to selegiline

Dashboard

Overall score: **0%**

1 -

Question 266 of 280

A 60-year-old man with a history of hypercholesterolaemia, hypertension and type 2 diabetes mellitus reports an episode of right sided facial weakness and dysphasia lasting thirty minutes earlier that same day. His symptoms have since resolved. His blood pressure is recorded at 130/85 mmHg and there is a carotid bruit present on the left side. What is his ABCD2 score?

<input type="radio"/>	3
<input type="radio"/>	4
<input type="radio"/>	5
<input type="radio"/>	6
<input type="radio"/>	7

Dashboard

Overall score: **0%**

1 -

Question 266 of 280

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3
4
5
6
7

Dashboard

Overall score: **0%**

1 -

□ Question 267 of 280



A 73-year-old man complained of a one day history of blurred vision in the right eye. He has a past history of poorly controlled hypertension and polycythaemia but otherwise enjoys good health. Visual acuity is 6/6 in the left eye and 6/18 in the right eye. Fundoscopy of the right eye is as follows:



What is the most likely diagnosis?

	Ischaemic optic neuropathy
	Central retinal artery occlusion
	Papilloedema
	Central retinal vein occlusion

Dashboard

Overall score: **0%**

1 -

□ Question 267 of 280



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What is the most likely diagnosis?

	Ischaemic optic neuropathy
	Central retinal artery occlusion
	Papilloedema
	Central retinal vein occlusion

Dashboard

Overall score: **0%**

1 -

□ Question 268 of 280



A 57 year old male presents with a 3 months history of increasing clumsiness in his hands and arms. He has a complicated past medical history: 22 years ago, he underwent a renal transplant after progressive deterioration in his renal function following diagnosis with autosomal dominant polycystic kidney disease aged 25. His transplant has functioned well since but the patient has since undergone two resections of squamous cell carcinomas and one serious lengthy hospital admission for a systemic fungal infection. He stopped working a year ago as a wine merchant, after complaining that he was no longer able to differentiate 'the smells of his wines as he got older'.

On examination, he is alert and orientated. Questioning was challenging due to his hearing impairment, despite bilateral hearing aids. He scored 17/30 on a mini-mental examination. Pupils were reactive with a full range of eye movements. Facial power and sensation were normal, with symmetrical palatal elevation and no tongue deviation. He was profoundly deaf bilaterally. Tone, power and sensation were normal, reflexes were present with downgoing plantars. However, you note significant bilateral finger-nose dysmetria and heel-shin malco-ordination.

Which investigation is likely to produce the unifying diagnosis?

	Lumbar puncture for cerebrospinal fluid including 14-3-3, S100
	EEG
	MRI head
	Neurogenetic testing
	Nerve conduction studies and EMG

Dashboard

Overall score: 0%

1 -

Question 268 of 280



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	EEG
	MRI head
	Neurogenetic testing
	Nerve conduction studies and EMG

Dashboard

Overall score: 0%

1 -

Question 269 of 280

□ □

A 67 year-old woman presents to hospital after a collapse at home. One week earlier she had seen her own doctor after feeling generally unwell with fever, myalgia, and coryza. These symptoms were attributed to a viral infection and have now resolved. However, for the past few days she has felt unsteady on her feet and has had to hold on to the furniture whilst walking around the house. For the last two days in particular she has also noticed that her vision has deteriorated, and she has been seeing double. Today she tried to hold onto the sofa whilst walking around the room, but misjudged the distance and lost her grip, causing her to fall to the floor. Her daughter who is also present adds that she feels her mothers speech is slurred compared to normal, and has been so for the past three days.

Her past medical history includes hypertension, hypothyroidism, type 2 diabetes, hyperlipidaemia, angina, and recurrent urinary tract infection. She takes ramipril, amlodipine, doxazosin, levothyroxine, metformin, gliclazide, simvastatin, atenolol, nicorandil, and nitrofurantoin. She does not smoke but admits to enjoying a glass of sherry on most nights. Usually she is independently mobile, without aids. She lives on her own and is self-caring.

On examination, there are some bruises on the left shoulder where she fell, but no suggestion of any fracture. Observations are normal and she is afebrile. Cardiovascular, respiratory, and abdominal examination is unremarkable. She is fully alert and oriented. Pupils are equal and reactive to light. Eye movements are grossly impaired in all directions. There is no facial asymmetry. Muscle power is normal in all limbs, but finger-nose pointing is impaired and she is unable to walk in a straight line. Reflexes are unobtainable. Sensation is normal.

What is the most likely diagnosis?

	Wernickes encephalopathy
	Viral cerebellitis
	Myasthenia gravis
	Miller Fisher syndrome
	Posterior circulation stroke

Overall score: **0%**

1 -

Question 269 of 280

□ □

A 67 year-old woman presents to hospital after a collapse at home. One week earlier she had seen her own doctor after feeling generally unwell with fever, myalgia, and coryza. These symptoms were attributed to a viral infection and have now resolved. However, for the past few days she has felt unsteady on her feet and has had to hold on to the furniture whilst walking around the house. For the last two days in particular she has also noticed that her vision has deteriorated, and she has been seeing double. Today she tried to hold onto the sofa whilst walking around the room, but misjudged the distance and lost her grip, causing her to fall to the floor. Her daughter who is also present adds that she feels her mothers speech is slurred compared to normal, and has been so for the past three days.

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	Wernickes encephalopathy
	Viral cerebellitis
	Myasthenia gravis
	Miller Fisher syndrome
	Posterior circulation stroke

Overall score: **0%**

1 -

□ Question 270 of 280



A 78-year-old male presents with a one-year history of progressive unsteadiness on walking. He had previously been extremely fit and healthy, walking around 2 miles to the shops every day and only retired as a publicist 3 years ago. He underwent radiotherapy for localised squamous cell carcinoma of his vocal cords 18 months ago but otherwise had no other past medical history. He admits to having drunk 'more than he should have' while working in the city but says he has since cut down to moderate levels. He stopped smoking 5 years ago, with a 30 pack year history. Over the past 3 months, he has become incontinent of urine and has to rely on pads, which he is greatly embarrassed by.

On examination, he has a shuffling gait in his lower limbs with good arm swing. He is markedly slowed and takes 120 seconds to walk 20 metres. He turns around 180 degrees in 6 steps with no resting tremor, rigidity or bradykinesia. Examination of his tone, power, sensation, coordination and reflexes are all unremarkable. His voice is quiet and whispering. His cranial nerves are normal with a full range of eye movements. An abbreviated mental test scores 9/10, a Montreal cognitive assessment (MOCA) scored 29/30. His initial blood tests are as follows:

Hb	94 g/l
MCV	103.3 fl
Platelets	$232 \times 10^9/l$
WBC	$6.3 \times 10^9/l$

Na ⁺	139 mmol/l
K ⁺	4.9 mmol/l
Urea	7.5 mmol/l
Creatinine	98 μ mol/l
CRP	2 mg/l
Vitamin B12	327ng/l
Folate	5.2 nmol/l

An MRI head is performed, demonstrating diffuse mild microangiopathic changes with prominently dilated lateral and

third ventricles. No intracranial masses are noted. You perform a lumbar puncture, with the patient lying in the left lateral position using a 22G spinal needle and obtain cerebrospinal fluid with the first pass. His opening pressure is 16.6 cmH2O. What is the most appropriate course of action?

	Remove 30mls cerebrospinal fluid and refer to neurosurgeons
	Prescribe urgent intravenous pabrinex
	Urgent urological referral for urodynamic studies +/- flexible cystoscopy
	Prescribe Sinemet 250 with anti-emetic and re-measure walking time
	Urgent CT angiography and prescribe aspirin 300mg

Dashboard

Overall score: 0%

1 -

□ Question 270 of 280



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Dashboard

Overall score: 0%

1 -

Question 271 of 280

A 46 year-old man is admitted to hospital after he is found wandering the streets, unable to remember who he is or how he got there. After a collateral history is obtained, he is referred to the neurologists for further investigation.

Over the last two months he has become increasingly forgetful and clumsy, and his behaviour has become progressively more bizarre. His speech has become confused, and he struggles with daily tasks. Others have commented that he has become very 'twitchy', and he sometimes drops things out of his hands without meaning to.

He was previously fit and well and the main carer for his father who suffers from motor neuron disease. His sister who previously helped him care for their father was recently killed in a car accident.

His only past medical history is that at age 22 he underwent extensive surgical resection of a large parafalcine meningioma which was discovered after investigation of chronic headache. Since the operation he has been free of headache.

On examination he is completely disoriented in time, place, and person. His gait is broad-based and uncoordinated, and during the examination you notice several shock-like jerks of his arms. Tone, power, reflexes, and sensation are otherwise normal, and cranial nerve examination is unremarkable.

What is the most likely diagnosis?

<input type="checkbox"/>	Viral encephalitis
<input type="checkbox"/>	Creutzfeld-Jakob disease
<input type="checkbox"/>	Frontotemporal dementia
<input type="checkbox"/>	Alzheimer's disease
<input type="checkbox"/>	Dissociative fugue

Overall score: **0%**

1 -

Question 271 of 280

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<input type="checkbox"/>	Alzheimer's disease
<input type="checkbox"/>	Dissociative fugue

Overall score: **0%**

1 -

Question 272 of 280

□ □

A 42-year-old man presented with a partial left Horner's syndrome (ptosis with miosis, no anhidrosis), ipsilateral neck pain and reduced visual acuity on the same side.

He reported that the first symptom was neck pain and that his vision worsened over the next two hours. On admission, his blood pressure was 145/80 mmHg and heart rate was 80 beats per minute in sinus rhythm. His chest was clear.

His initial non-contrast enhanced CT brain scan showed a very small area of gliosis in the left frontal area possibly related to a distant injury, but no acute pathology.

Which of the following tests is likely to give you a diagnosis?

	MRI of the brain
	CT carotid angiogram
	Chest X-Ray
	Erythrocyte sedimentation rate (ESR) and temporal artery biopsy
	CT venogram of the neck and brain

Dashboard

Overall score: 0%

1 -

Question 272 of 280

□ □

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Dashboard

Overall score: **0%**

1 -

Question 273 of 280

□ □

A 73 year old gentleman is admitted to the medical assessment unit with a fall. A collateral history from his wife reveals that he has been having frequent falls (nearly 2-3 times a week) for the last 4 months. This has resulted in multiple admissions where a chest infection is thought to be the main cause for his deterioration. His wife also states he is having problems swallowing, chokes on his food frequently and has not been himself recently with frequent bouts of aggression. On examination you note the patient has an expressionless face, and kyphosed posture and mild tremor bilaterally. He has cogwheeling of both upper limbs. Examination of his legs is unremarkable. On inspection of his gait, it appears parkinsonian in character, but you stop him only after a few steps as he seems unsteady. On cranial nerve examination you note he has difficulty following your finger downwards but the remainder of the cranial nerve examination is normal. Given these features, what is the most likely underlying diagnosis?

	Multiple system atrophy
	Idiopathic Parkinsons disease
	Progressive supranuclear palsy
	Vascular Parkinsonism
	Lewy body dementia

Dashboard

Overall score: 0%

1 -

Question 273 of 280

□ □

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	Idiopathic Parkinsons disease
	Progressive supranuclear palsy
	Vascular Parkinsonism
	Lewy body dementia

Dashboard

Overall score: **0%**

1 -

□ Question 274 of 280



An urgent medical consult was requested regarding a 52-year-old female who had been admitted to the neurology ward a few hours previously and who had developed hypotension. She had presented to the Emergency Department with new weakness in her legs that had occurred over a course of three days. She also complained of continual lower back pain and pain in the top of her thighs, and as her illness progressed she was no longer able to weight bear. She had a past medical history of hypothyroidism, for which she was prescribed levothyroxine 125mcg OD, and other than an episode of viral gastroenteritis diagnosed by her GP two weeks prior to her current admission she was fit and well. Upon transfer to the neurology ward blood investigations, a chest x-ray, CT head scan and lumbar puncture were performed, the results of which are as follows:

Hb	132 g/l
Platelets	248 * 10 ⁹ /l
WBC	8.2 * 10 ⁹ /l

Na ⁺	138 mmol/l
K ⁺	5.2 mmol/l
Urea	6.4 mmol/l
Creatinine	77 µmol/l
CRP	15 mg/l
Glucose	7.2 mmol/l
TSH 0.26	(NR 0.4-3.6 mu/l)
Free T4 10.6	(NR 10 - 20 pmol/L)

Autoantibody screen: awaiting results

Urinalysis: negative

Urine MCS: awaiting results

Blood MCS: awaiting results

Chest x-ray: normal appearances of heart and lung fields
CT head: normal intracranial appearances

Lumbar puncture:

Protein	0.8g (NR 0.2-0.4 g/L)
Glucose	6.3 (blood glucose 7.2)
WCC 8	(<5/mm ³)
Opening pressure	15 (NR 10-20 cmH2O)
Microscopy	nil seen, awaiting culture and sensitivity result

Whilst awaiting definitive measurement her blood pressure was noted to fluctuate between 55/30 mmHg and 162/84 mmHg within a matter of minutes; at present her blood pressure was 62/42 mmHg. Upon examination of her cardiovascular system, she was clinically well perfused with a normal and palpable radial pulse, a JVP of 3cm and a peripheral and central capillary refill time of less than two seconds. He heart rate was 82 bpm. Examination of her respiratory system was unremarkable with no respiratory distress, a respiratory rate of 16/min and oxygen saturations of 99% on air. Examination of her gastrointestinal system was unremarkable. Examination of her peripheral nervous system revealed a power deficit of grade 2/5 in all muscle groups of the lower limbs, power 5/5 in the upper limbs and normal sensation and coordination throughout. Knee and ankle reflexes were absent bilaterally. Cranial nerve examination was unremarkable.

What is single next best step with regards to management of her blood pressure?

	Commence dobutamine infusion
	Commence noradrenaline infusion
	Commence intravenous fluid resuscitation with 500ml of colloid stat
	Commence intravenous immunoglobulin
	Arrange urgent plasmapheresis

Dashboard

Overall score: 0%

1 -

□ Question 274 of 280



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CRP	15 mg/l
Glucose	7.2 mmol/l
TSH 0.26	(NR 0.4-3.6 mu/l)
Free T4 10.6	(NR 10 - 20 pmol/L)

Autoantibody screen: awaiting results

Urinalysis: negative

Urine MCS: awaiting results

Blood MCS: awaiting results

Chest x-ray: normal appearances of heart and lung fields
CT head: normal intracranial appearances

Lumbar puncture:

Protein	0.8g (NR 0.2-0.4 g/L)
Glucose	6.3 (blood glucose 7.2)
WCC 8	(<5/mm ³)
Opening pressure	15 (NR 10-20 cmH2O)
Microscopy	nil seen, awaiting culture and sensitivity result

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	Commence intravenous immunoglobulin
	Arrange urgent plasmapheresis

Dashboard

Overall score: 0%

1 -

□ Question 275 of 280

□ □

A 22-year-old male is referred to clinic by his GP. His initial complaint had been that his friends have been increasingly remarking on how his eyelids look increasing 'droopy' over the past 9 months. He denies any diplopia or muscle weakness. He has no past medical history, is a non-smoker and non-drinker. On examination, you note bilateral inability to abduct or adduct his eyes. Vertical gaze is also inconsistently impaired. His upper and lower limb neurological investigation was unremarkable except very mild finger-nose dysmetria, his bloods tests show no abnormalities. His ECG demonstrates sinus rhythm with a PR interval of 260ms. Fundoscopy reveals a pigmented retina. What is the diagnosis?

	Myasthenia gravis
	Thyroid eye disease
	Oculopharyngeal muscular dystrophy
	Extraocular muscle fibrosis
	Kearns-Sayre syndrome

Dashboard

Overall score: 0%

1 -

□ Question 275 of 280

□ □

A 22-year-old male is referred to clinic by his GP. His initial complaint had been that his friends have been increasingly remarking on how his eyelids look increasing 'droopy' over the past 9 months. He denies any diplopia or muscle weakness. He has no past medical history, is a non-smoker and non-drinker. On examination, you note bilateral inability to abduct or adduct his eyes. Vertical gaze is also inconsistently impaired. His upper and lower limb neurological investigation was unremarkable except very mild finger-nose dysmetria, his bloods tests show no abnormalities. His ECG demonstrates sinus rhythm with a PR interval of 260ms. Fundoscopy reveals a pigmented retina. What is the diagnosis?

	Myasthenia gravis
	Thyroid eye disease
	Oculopharyngeal muscular dystrophy
	Extraocular muscle fibrosis
	Kearns-Sayre syndrome

Dashboard

Overall score: **0%****1** -

Question 276 of 280



A 68-year-old man who has a history of Type 2 diabetes for the past 12 years comes to the clinic for review. His diabetes is currently managed with BD mixed insulin and over the past year he has suffered increasing pins and needles and pain in both feet. Apart from Type 2 diabetes, a previous myocardial infarction and intermittent urinary retention over the past year are noted. His GP has diagnosed him with benign prostatic hypertrophy. Examination reveals a blood pressure of 148/82 mmHg, her pulse is 80 beats per minute and regular. There is peripheral neuropathy affecting both feet, which are numb to just below the ankle. Routine bloods including renal function are unremarkable.

Which of the following is the most appropriate intervention?

	Amitriptyline
	Carbamazepine
	Duloxetine
	Pregabalin
	Tramadol

Dashboard

Overall score: 0%

1 -

Question 276 of 280

□ □

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	Amitriptyline
	Carbamazepine
	Duloxetine
	Pregabalin
	Tramadol

Dashboard

Overall score: **0%**

1 -

Question 277 of 280



A 62-year-old male presents to the emergency department via blue light ambulance 90 minutes after sudden onset right sided weakness, expressive and receptive dysphasia. He is known to be T2DM, hypertensive on 3 agents and has a 40 pack year smoking history. On examination, you demonstrate a dense 0 out of 5 right hemiparesis. The patient has a complete expressive and receptive dysphasia, which you confirm to be new following a collateral history from his wife. The patient scores an NIHSS score of 7. He has no history of any recent surgery or head trauma. He is not on an anticoagulant and has no past medical history of coagulation disorders. His CT head demonstrates no areas of haemorrhage and a likely evolving area of ischaemic in the left middle cerebral artery territory. The radiologist calculated his ASPECT score to be 8. His observations on arrival are: temperature 36.7 degrees, heart rate 90/min and regular, blood pressure 220/150 mmHg, sats 99% on air, respiratory rate 20/min. What is the most appropriate first-line treatment?

	IV thrombolysis
	Aspirin 300mg OD
	PO amlodipine 2.5mg
	MRI head with diffusion weighting sequences
	IV labetalol

Dashboard

Overall score: 0%

1 -

Question 277 of 280

□ □

A 62-year-old male presents to the emergency department via blue light ambulance 90 minutes after sudden onset right sided weakness, expressive and receptive dysphasia. He is known to be T2DM, hypertensive on 3 agents and has a 40 pack year smoking history. On examination, you demonstrate a dense 0 out of 5 right hemiparesis. The patient has a complete expressive and receptive dysphasia, which you confirm to be new following a collateral history from his wife. The patient scores an NIHSS score of 7. He has no history of any recent surgery or head trauma. He is not on an anticoagulant and has no past medical history of coagulation disorders. His CT head demonstrates no areas of haemorrhage and a likely evolving area of ischaemic in the left middle cerebral artery territory. The radiologist calculated his ASPECT score to be 8. His observations on arrival are: temperature 36.7 degrees, heart rate 90/min and regular, blood pressure 220/150 mmHg, sats 99% on air, respiratory rate 20/min. What is the most appropriate first-line treatment?

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	Aspirin 300mg OD
	PO amlodipine 2.5mg
	MRI head with diffusion weighting sequences
	IV labetalol

Dashboard

Overall score: **0%**

1 -

Question 278 of 280

A 23 year old investment banking intern presents to the urgent care centre complaining of progressive unsteadiness on walking over the past 6 months. He has no past medical history except type 2 diabetes, which is diet controlled, diagnosed one year ago. He has no family history of any diseases. He has been working very long hours for the past 2 years and reports high levels of stress at work, coupled a culture of 'binge-drinking' to team bond after work. Over the past 3 months, he has noticed a lack of articulation with his speech, which he assumed was secondary to alcohol. He estimates he drinks up to 30 units of alcohol a week. On examination, his cardiovascular, respiratory and abdominal systems are unremarkable. His finger-nose test is impaired bilaterally and is unable to tandem walk. He denies any neck stiffness or headache. He has a full range of eye movements. He has absent reflexes in his lower limbs and upgoing plantars bilaterally. Which investigation will provide the definitive diagnosis?

	MRI head with gadolinium contrast
	CT angiography including posterior vessels
	Lumbar puncture
	Serum genetic testing
	Muscle biopsy

Dashboard

Overall score: 0%

1 -

Question 278 of 280

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	MRI head with gadolinium contrast
	CT angiography including posterior vessels
	Lumbar puncture
	Serum genetic testing
	Muscle biopsy

Dashboard

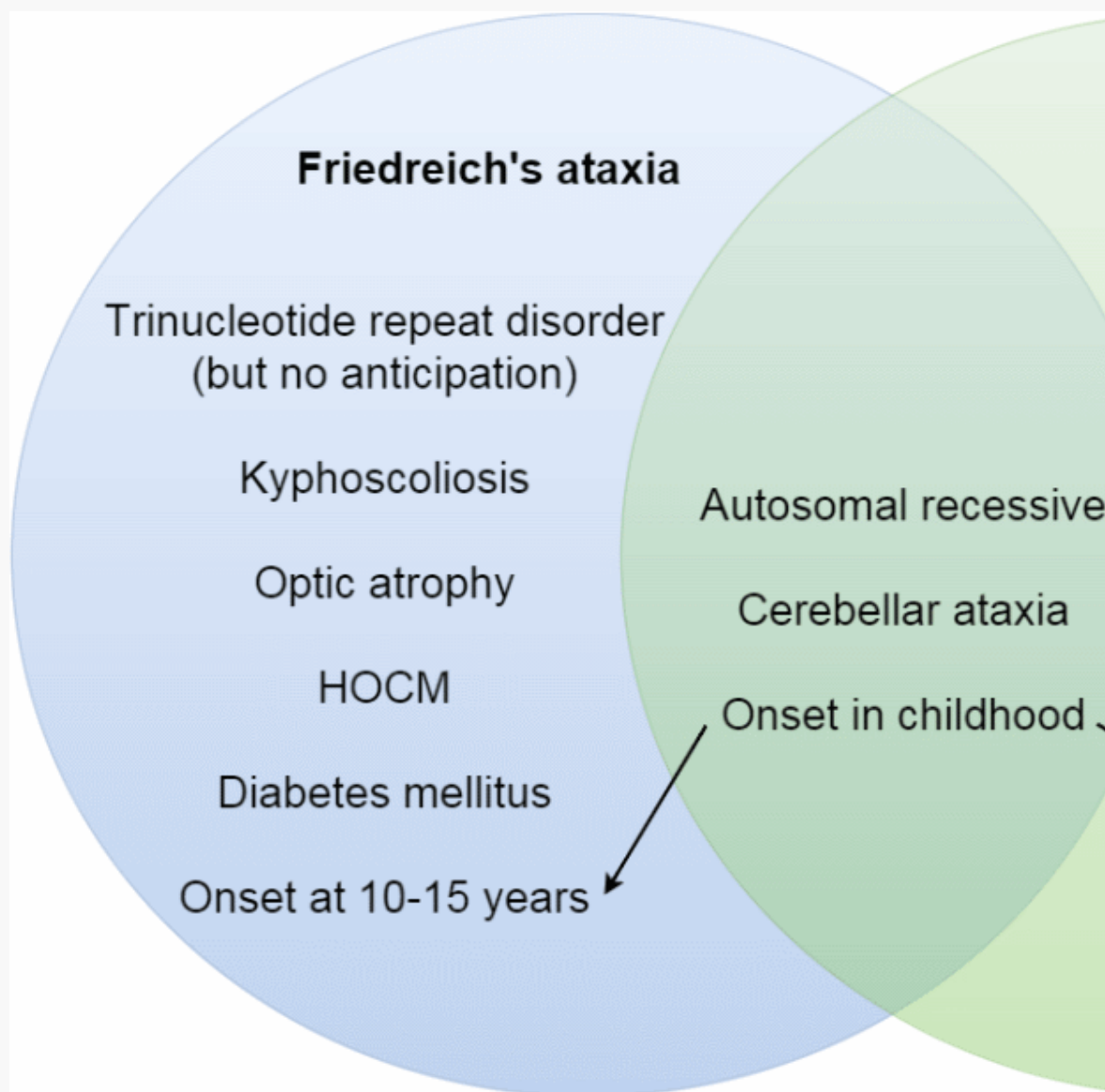
Overall score: 0%

1 -

Question 278 of 280

A 23 year old investment banker has been struggling to walk over the past 6 months. He was diagnosed one year ago. He has been drinking alcohol for 10 years and reports high level of alcohol consumption. In the past 3 months, he has noticed increasing stiffness in his joints. He estimates he drinks up to 30 units of alcohol per week. His systems are unremarkable. He has no family history of stiffness or headache. He has plantar fasciitis bilaterally. Which investigation is most likely to confirm the diagnosis?

<input type="checkbox"/>	MRI head with gadolinium
<input type="checkbox"/>	CT angiography of the head
<input type="checkbox"/>	Lumbar puncture
<input checked="" type="checkbox"/>	Serum genetic testing
<input type="checkbox"/>	Muscle biopsy



Dashboard

Overall score: 0%

1 -

□ Question 279 of 280



A 45 year old male presented with right shoulder pain and weakness. Three weeks ago he had been brought to the emergency department (ER) with the same complaint. The pain was so severe that it awoke him from sleep. At that time he took two paracetamol tablets but that gave him no relief. Eventually the ER team had been forced to give him morphine to relieve his agony having tried less potent analgesia. On further questioning he described the pain as sharp, exacerbated by movement of the shoulder, with numbness at the shoulder tip.

On examination, he was holding his right arm with his left one in adduction and internal rotation. Wasting of the deltoid muscle had been noted. The biceps tendon jerk was absent. Sensations were intact except in a small region over deltoid muscle. Lower limb examination was normal.

One month ago he had a flu. The past medical history was otherwise of no significance.

He admitted to drinking alcohol at least four times a week. He has a ten year old son who is an insulin dependent diabetic.

The following investigations were ordered:

Hb	14 g/dl
Platelets	$180 \times 10^9/l$
WBC	$6 \times 10^9/l$
MCV	85 fl
MCH	0.6 fmol/cell
MCHC	21 mmol/l
Na ⁺	135 mmol/l
K ⁺	4 mmol/l
Creatinine	85 μ mol/l
Urea	3.2 mmol/l
ESR	4 mm/hr

ANA	negative
-----	----------

What is the most likely diagnosis?

	Syringomyelia
	Brachial neuritis
	Adhesive capsulitis
	Polymyalgia rheumatica
	Cervical radiculopathy

Dashboard

Overall score: **0%**

1 -

□ Question 279 of 280



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What is the most likely diagnosis?

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	Brachial neuritis
	Adhesive capsulitis
	Polymyalgia rheumatica
	Cervical radiculopathy

Dashboard

Overall score: **0%**
1 -

Question 280 of 280

□ □

A 75-year-old woman presents with a 24-hour history of gradual onset, severe 10/10, frontal headache associated with double vision. The history is otherwise unremarkable. On examination, she has a partial ptosis of the right eye and a pupil resting outwards and downwards with a dilated sluggishly reacting pupil. There is a failure of intorsion of the right eye. Neurological and physical examination are otherwise unremarkable. She has normal routine blood tests and a normal plain CT head. What is the most important next investigation?

	Lumbar puncture
	CT angiogram cerebral vessels.
	Carotid artery biopsy
	Indomethacin trial
	Single fibre EMG of the ocular muscles

Dashboard

Overall score: 0%

1 -

□ Question 280 of 280

□

A 75-year-old woman presents with a 24-hour history of gradual onset, severe 10/10, frontal headache associated with double vision. The history is otherwise unremarkable. On examination, she has a partial ptosis of the right eye and a pupil resting outwards and downwards with a dilated sluggishly reacting pupil. There is a failure of intorsion of the right eye. Neurological and physical examination are otherwise unremarkable. She has normal routine blood tests and a normal plain CT head. What is the most important next investigation?

	Lumbar puncture
	CT angiogram cerebral vessels.
	Carotid artery biopsy
	Indomethacin trial
	Single fibre EMG of the ocular muscles

Dashboard

Overall score: **0%**

1 -

Question 1 of 57

□ □

An 83 year old male presents with his third admission of right lower zone community acquired pneumonia in 5 months. A CT thorax demonstrates a 2.2cm mass in right lower lobar bronchus with no regional lymph nodes. Bronchoscopy reveals non-small cell lung Ca 4cm from the carina, CT staging reveals no other metastases. A final staging diagnosis of T1b N0 M0 is made, at stage 1A. The patient undergoes lung function testing as follows:

FVC	2.2l
FEV1	1.7l/s
TLCO	42% of predicted

What is the appropriate treatment?

	Right pneumonectomy
	Right lower lobectomy
	Chemotherapy
	Radiotherapy
	Palliative care

Dashboard

Overall score: 0%

1 -

Question 1 of 57

□ □

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TLCO	42% of predicted

What is the appropriate treatment?

	Right pneumonectomy
	Right lower lobectomy
	Chemotherapy
	Radiotherapy
	Palliative care

Dashboard

Overall score: **0%**

1 -

□ Question 2 of 57



A 65-year-old male with a 60 pack year smoking history has been diagnosed with small cell lung cancer. He is currently undergoing chemotherapy. Over the last few months, he has noticed his vision deteriorating and complains of diplopia. He also feels weaker in his upper limbs although his symptoms do fluctuate.

On examination, he has mild ptosis of the eyelids bilaterally and a complex ophthalmoparesis affecting both eyes. He also has reduced power proximally in the upper limbs.

In this clinical syndrome, in addition to electrophysiological studies, which of the following blood test results is likely to assist with the diagnosis?

	Presence of anti-muscle specific kinase antibodies
	Presence of anti-neuronal antibodies
	Presence of voltage gated potassium channel antibodies
	Presence of sodium channel antibodies
	Presence of voltage gated calcium channel antibodies

Dashboard

Overall score: 0%

1 -

Question 2 of 57



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	Presence of voltage gated potassium channel antibodies
	Presence of sodium channel antibodies
	Presence of voltage gated calcium channel antibodies

Dashboard

Overall score: 0%

1 -

□ Question 3 of 57



A 43-year-old female presents with neck discomfort worsening over the past 2 months. She has no other past medical or family history. Examination reveals a firm neck lump moving with swallowing but not with tongue protrusion. Subsequent ultrasound of her neck with fine needle aspirate reveals a 2.5cm papillary thyroid carcinoma. A CT neck reveals one single lymph node in her left anterior cervical chain. What is the optimum treatment?

	Thyroidectomy and neck dissection with postoperative radioiodine ablation
	Thyroidectomy and neck dissection without postoperative radioiodine ablation
	Lobectomy and neck dissection with postoperative radioiodine ablation
	Lobectomy and neck dissection without postoperative radioiodine ablation
	Monitor annually

Dashboard

Overall score: 0%

1 -

□ Question 3 of 57

□ □

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	Lobectomy and neck dissection without postoperative radioiodine ablation
	Monitor annually

Dashboard

Overall score: **0%**

1 -

Question 4 of 57



A 63-year-old man is diagnosed with colorectal cancer. Following successful resection he starts adjuvant capecitabine but after six doses develops severe diarrhoea, weakness and desquamation of the hands, feet and face. On admission, he is pancytopenic and has electrolyte abnormalities requiring IV replacement. His initial blood tests are shown below.

Na ⁺	140 mmol/l
K ⁺	3.6 mmol/l
Urea	9.2 mmol/l
Creatinine	125 µmol/l
Hb	75 g/l
Platelets	35 * 10 ⁹ /l
WBC	0.4 * 10 ⁹ /l
Neutrophils	0.03 * 10 ⁹ /l
Adjusted Ca ²⁺	1.5 mmol/l
Mg ²⁺	0.32 mmol/l
Glucose	4.0 mmol/l

What is the most likely cause?

	DPD (dihydropyrimidine dehydrogenase) deficiency
	Infective gastroenteritis
	Cancer recurrence
	Pityriasis alba

Dashboard

Overall score: 0%

1 -

Question 4 of 57



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Glucose	4.0 mmol/l

What is the most likely cause?

	DPD (dihydropyrimidine dehydrogenase) deficiency
	Infective gastroenteritis
	Cancer recurrence
	Pityriasis alba

Dashboard

Overall score: **0%**

1 -

□ Question 5 of 57



A 46-year-old woman with adenocarcinoma of the breast with liver metastases presents to the emergency department with increased thirst and abdominal pain.

She is dehydrated on examination, with a left-sided mastectomy scar and an enlarged liver with an irregular edge. Heart rate is 95bpm, respiratory rate is 18/min, she is afebrile and her oxygen saturation's are 99% on air.

Bloods:

Hb	105 g/l	Na ⁺	135 mmol/l	Bilirubin	40 µmol/l
Platelets	350 * 10 ⁹ /l	K ⁺	3.7 mmol/l	ALP	150 u/l
WBC	9 * 10 ⁹ /l	Urea	7.9 mmol/l	ALT	140 u/l
Neuts	4.0 * 10 ⁹ /l	Creatinine	150 µmol/l	γGT	250 u/l
Lymphs	3. * 10 ⁹ /l			Albumin	24 g/l
Eosin	0.1 * 10 ⁹ /l	Ca (adj)	3.45mmol/l	PTH	2ng/dl

What is the most appropriate first step in her management?

	Refer to oncology for urgent chemotherapy
	Furosemide
	Intravenous fluid
	IV bisphosphonate
	Prednisolone

Overall score: **0%**

1 -

Question 5 of 57



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What is the most appropriate first step in her management?

	Refer to oncology for urgent chemotherapy
	Furosemide
	Intravenous fluid
	IV bisphosphonate
	Prednisolone

Overall score: **0%**

1 -

Question 6 of 57



A 72-year-old man presents to the emergency department with shortness of breath. He describes his breathlessness has progressively become worse over the last two weeks and is especially troublesome when leaning forward. His wife has commented that his appearance has changed too, with his face becoming more swollen and different in colour. He has a past medical history of right-sided heart failure, myocardial infarction, type two diabetes, COPD and small cell lung cancer diagnosed three months ago. He is an ex-smoker of 20 pack-years and drinks moderate amounts of alcohol.

On examination, he appears settled at rest. His face is swollen and slightly purple. His neck veins are distended and his JVP is markedly elevated to 4cm. Auscultation reveals bibasal crepitations. There is pitting oedema at the ankles. A chest X-ray demonstrates a widened mediastinum. What investigation is most appropriate to establish the diagnosis?

	ECG
	Trans-thoracic echocardiogram
	Trans-oesophageal echocardiogram
	Bronchoscopy
	CT chest

Dashboard

Overall score: 0%

1 -

Question 6 of 57



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	ECG
	Trans-thoracic echocardiogram
	Trans-oesophageal echocardiogram
	Bronchoscopy
	CT chest

Dashboard

Overall score: 0%

1 -

□ Question 7 of 57



A 72-year-old man is referred to the oncology team after presenting to the emergency department. The patient reports progressive lower thoracic back pain over the past three weeks. The pain had now reached an intensity that had prevented him from sleeping during the past two nights, despite over the counter analgesics. The patient reported that coughing caused a severe exacerbation of the pain, but denied radiation of the pain. The patient had previously suffered mild lower back pain after exercise, but could recall no episodes that compared in intensity to his present symptoms.

The patient's wife reported she felt the patient had been unsteady on his feet over the past few days, and reported that he had nearly fallen on several occasions. The patient denied any history of sphincter disturbance or sensory symptoms. On direct questioning, the patient revealed that he had been troubled by a severe cough over the past two months and had also lost 7 kilograms in weight. He denied any history of fevers or night sweats.

The patient had an unremarkable past medical history and took no regular medications. He was a retired builder, who had stopped smoking when he took retirement seven years previously.

Peripheral nerve examination of upper limbs: normal tone, normal power, normal coordination, normal sensation, reflexes intact and symmetrical.

Peripheral nerve examination of lower limbs: tone generally increased bilaterally with 5 beats of clonus in left lower limb; power generally slightly reduced (4+/5) bilaterally, although patient limited by back pain; normal coordination; light touch sensation reduced to mid-point between symphysis pubis and umbilicus; knee and ankle jerks brisk bilaterally, plantar response up-going in left lower limb.

Respiratory examination: borderline clubbing of fingers; reduced resonance and air entry in left upper zone.

Musculoskeletal examination: point tenderness in midline of back around level of T11 / T12 vertebrae.

What is the appropriate investigation of patient's back pain?

	MRI whole-spine within 24 hours
	MRI lumbar-thoracic spine within 24 hours
	CT lumbar-thoracic spine within 24 hours

	MRI whole-spine within 7 days
	CT myelography within 7 days

Dashboard

Overall score: **0%**
1 -

□ Question 7 of 57



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	CT myelography within 7 days

Dashboard

Overall score: **0%**
1 -

Question 7 of 57

A 72-year-old man is referred with progressive lower thoracic back pain that has prevented him from sleeping. He has a long history of smoking and coughing caused a severe emphysema. He has mild lower back pain after exertion.

The patient's wife reported that he had nearly fallen on several occasions. On direct questioning, the patient had also lost 7 kilograms in the last 6 months.

The patient had an unremarkable medical history and had stopped smoking when he took retirement seven years previously.

Peripheral nerve examination of upper limbs: normal tone, normal power, normal coordination, normal sensation, reflexes intact and symmetrical.

Peripheral nerve examination of lower limbs: tone generally increased bilaterally with 5 beats of clonus in left lower limb; power generally slightly reduced (4+/5) bilaterally, although patient limited by back pain; normal coordination; light touch sensation reduced to mid-point between symphysis pubis and umbilicus; knee and ankle jerks brisk bilaterally, plantar response up-going in left lower limb.

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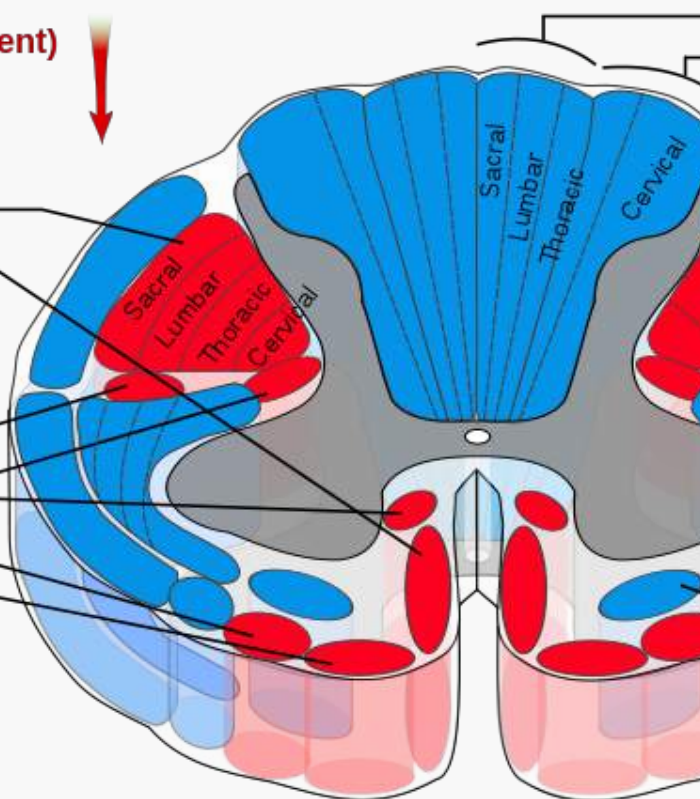
Motor and descending (efferent) pathways (red)

Pyramidal tracts

- Lateral corticospinal tract
- Anterior corticospinal tract

Extrapyramidal Tracts

- Rubrospinal tract
- Reticulospinal tracts
- Olivospinal tract
- Vestibulospinal tract



MRI whole-spine within 24 hours

MRI lumbar-thoracic spine within 24 hours

CT lumbar-thoracic spine within 24 hours

	MRI whole-spine within 7 days
	CT myelography within 7 days

Dashboard

Overall score: **0%**
1 -

□ Question 8 of 57



A medical consult was sought from the nursing staff concerning a 68-year-old gentleman admitted with a urinary tract infection. He was diagnosed with terminal adenocarcinoma of the pancreas six months ago. He had complained of increasing severe abdominal pain for the last few weeks for which his GP commenced and then titrated morphine sulphate tablets (MST) achieving a temporary analgesic effect with each increment. By the time of admission he had been using 150mg BD and was unable to tolerate any further dose increases owing to drowsiness.

His drug history comprised of ciprofloxacin 250mg BD started four days ago for the management of urinary tract infection, paracetamol 1g QDS, tramadol 100mg QDS, MST 150mg BD, senna 2 tabs ON & Movicol one sachet BD.

In view of the continuing abdominal pain investigations were organised by the inpatient team revealing the following findings:

Hb	135 g/l
Platelets	224 * 10 ⁹ /l
WBC	11.2 * 10 ⁹ /l

Bilirubin	23 µmol/l
ALP	189 u/l
ALT	326 u/l
γGT	178 u/l
Albumin	34 g/l

Chest x-ray: Normal heart borders and lung fields, no evidence of subdiaphragmatic air.

Abdominal x-ray: presence of faeces, no evidence of dilatation.

USS abdomen: multiple hypoechoic lesions within the liver, nil else abnormal noted.

What is the next most appropriate management option?

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	Commence syringe driver containing diamorphine
	Refer for immediate surgical consult
	Refer for palliative radiotherapy
	Convert MST to fentanyl
	Commence trial with dexamethasone

Dashboard

Overall score: 0%

1 -

□ Question 8 of 57



A medical consult was sought from the nursing staff concerning a 68-year-old gentleman admitted with a urinary tract infection. He was diagnosed with terminal adenocarcinoma of the pancreas six months ago. He had complained of increasing severe abdominal pain for the last few weeks for which his GP commenced and then titrated morphine sulphate tablets (MST) achieving a temporary analgesic effect with each increment. By the time of admission he had been using 150mg BD and was unable to tolerate any further dose increases owing to drowsiness.

His drug history comprised of ciprofloxacin 250mg BD started four days ago for the management of urinary tract infection, paracetamol 1g QDS, tramadol 100mg QDS, MST 150mg BD, senna 2 tabs ON & Movicol one sachet BD.

In view of the continuing abdominal pain investigations were organised by the inpatient team revealing the following findings:

Hb	135 g/l
Platelets	224 * 10 ⁹ /l
WBC	11.2 * 10 ⁹ /l

Bilirubin	23 µmol/l
ALP	189 u/l
ALT	326 u/l
γGT	178 u/l
Albumin	34 g/l

Chest x-ray: Normal heart borders and lung fields, no evidence of subdiaphragmatic air.

Abdominal x-ray: presence of faeces, no evidence of dilatation.

USS abdomen: multiple hypoechoic lesions within the liver, nil else abnormal noted.

What is the next most appropriate management option?

	Commence syringe driver containing diamorphine
	Refer for immediate surgical consult
	Refer for palliative radiotherapy
	Convert MST to fentanyl
	Commence trial with dexamethasone

Dashboard

Overall score: **0%**

1 -

Question 9 of 57

□ □

A 54-year-old woman presents to the emergency department. She has noticed a sore throat over the last 24 hours and checked her temperature and found it to be 38.2°C. Her other observations are all normal. She has had no other symptoms and specifically denies coughing, chest pain, dysuria and diarrhoea. She is currently undergoing chemotherapy for breast cancer having last had treatment six days ago. What is the most appropriate treatment?

	Confirm neutropenia before treatment
	IV co-amoxiclav and oral clarithromycin
	Oral metronidazole
	IV piperacillin with tazobactam
	IV gentamicin

Dashboard

Overall score: 0%

1 -

Question 9 of 57



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	Oral metronidazole
	IV piperacillin with tazobactam
	IV gentamicin

Dashboard

Overall score: **0%**

1 -

□ Question 10 of 57



A 60-year-old woman presented to the emergency department with recurrent episodes of severe headache and vomiting over past 3-4 days. She was known to have underlying metastatic breast cancer for which she was receiving palliative chemotherapy. She was also known to have underlying type 2 diabetes mellitus and osteoarthritis of bilateral knee joints.

On examination, her pulse rate was 105/min, respiratory rate was 16/min, blood pressure was 120/80 mmHg. Fundoscopy revealed early papilloedema.

A contrast enhanced CT brain was done which showed a solitary mass of 3 cm in the left cerebral hemisphere.

What is the next appropriate management?

	Start 16 mg of i.v dexamethasone and prophylactic anticonvulsants
	Start 16 mg of dexamethasone and arrange urgent MRI brain
	Refer to neurosurgery for biopsy of the brain lesion
	Refer to radiation oncologist for Whole brain radiotherapy
	Stereotactic radiosurgery

Dashboard

Overall score: 0%

1 -

□ Question 10 of 57



A 60-year-old woman presented to the emergency department with recurrent episodes of severe headache and vomiting over past 3-4 days. She was known to have underlying metastatic breast cancer for which she was receiving palliative chemotherapy. She was also known to have underlying type 2 diabetes mellitus and osteoarthritis of bilateral knee joints.

On examination, her pulse rate was 105/min, respiratory rate was 16/min, blood pressure was 120/80 mmHg. Fundoscopy revealed early papilloedema.

A contrast enhanced CT brain was done which showed a solitary mass of 3 cm in the left cerebral hemisphere.

What is the next appropriate management?

	Start 16 mg of i.v dexamethasone and prophylactic anticonvulsants
	Start 16 mg of dexamethasone and arrange urgent MRI brain
	Refer to neurosurgery for biopsy of the brain lesion
	Refer to radiation oncologist for Whole brain radiotherapy
	Stereotactic radiosurgery

Dashboard

Overall score: **0%**

1 -

□ Question 11 of 57



A 51-year-old man is investigated for a chronic cough, chest pain and dyspnoea. He also reports some difficult swallowing bread and meat for the past two weeks. He has no past medical history of note although has smoked for the past 30 years.

A CT scan is requested:





What is the most likely diagnosis?

	Sarcoidosis
	Lung cancer
	Cardiac myxoma
	Oesophageal cancer
	Thymoma

Dashboard

Overall score: **0%**

1 -

□ Question 11 of 57



A 51-year-old man is investigated for a chronic cough, chest pain and dyspnoea. He also reports some difficult swallowing bread and meat for the past two weeks. He has no past medical history of note although has smoked for the past 30 years.

A CT scan is requested:





What is the most likely diagnosis?

	Sarcoidosis
	Lung cancer
	Cardiac myxoma
	Oesophageal cancer
	Thymoma

Dashboard

Overall score: **0%**

1 -

□ Question 12 of 57



You are asked to review a 67-year-old gentleman who was admitted to the medical emergency unit with pneumonia. He had been diagnosed with terminal small cell cancer of the lung which had extensively metastasised to his liver, thoracic vertebrae and femur bones. His past medical history was comprised of ischaemic heart disease, hypertension, hypercholesterolaemia and COPD.

His main complaint was of progressively worsening pain in his spine and legs. This was particularly bothersome at night; a trial of bisphosphonate therapy and radiotherapy did not provide any symptomatic relief. He was commenced initially on oral morphine sulphate solution which was converted to morphine sulphate tablets (MST); he had been on 60mg BD but this was titrated by the palliative care community nurse to 70mg BD a couple of days prior to admission with excellent analgesic effect. He was also using Oramorph solution 10mg on average 5-6 times a day for breakthrough pain.

He had been accordingly treated with intravenous antibiotics whilst on the ward making a full recovery. Prior to discharge, he was very keen on commencing transdermal treatment so as to minimise the number of oral medications taken.

What is the most appropriate starting dose to commence, with a view to completely discontinuing all oral opiate medication?

	Commence Fentanyl 12 72 hr patch, paracetamol 1g QDS and oramorph solution PRN for breakthrough pain
	Commence Fentanyl 25 72 hr patch, paracetamol 1g QDS and oramorph solution PRN for breakthrough pain
	Commence Fentanyl 50 72 hr patch, paracetamol 1g QDS and oramorph solution PRN for breakthrough pain
	Commence Fentanyl 75 72 hr patch, paracetamol 1g QDS and oramorph solution PRN for breakthrough pain
	Commence Fentanyl 100 72 hr patch, paracetamol 1g QDS and oramorph solution PRN for breakthrough pain

Overall score: **0%**

1 -

□ Question 12 of 57



You are asked to review a 67-year-old gentleman who was admitted to the medical emergency unit with pneumonia. He had been diagnosed with terminal small cell cancer of the lung which had extensively metastasised to his liver, thoracic vertebrae and femur bones. His past medical history was comprised of ischaemic heart disease, hypertension, hypercholesterolaemia and COPD.

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	Commence Fentanyl 100 72 hr patch, paracetamol 1g QDS and oramorph solution PRN for breakthrough pain

Overall score: **0%**

1 -

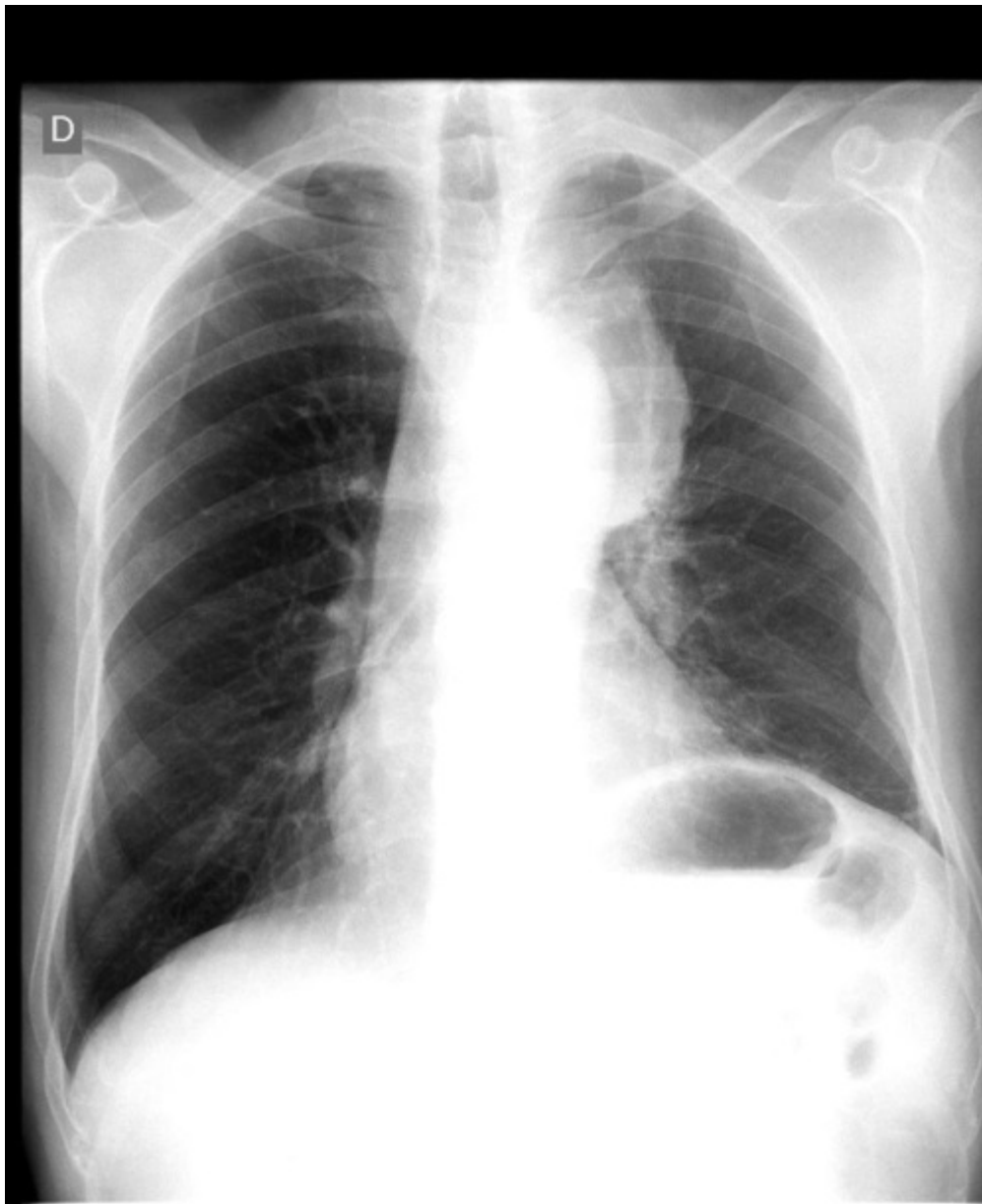
□ Question 13 of 57

□ □

A 70-year-old man is investigated for dysphagia and chest pain. These symptoms have been getting progressively worse for the past 3 months and have not responded to a trial of a proton pump inhibitor. There is no history of weight loss or anorexia.

On examination you note a left-sided partial ptosis. The patient also complains of double vision when you are assessing eye movements. Sustained upward gaze exacerbates his ptosis.

A chest x-ray is requested:



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What is the most likely diagnosis?

	Lung cancer
	Cardiac myxoma
	Tuberculosis
	Sarcoidosis
	Thymoma

Dashboard

Overall score: **0%**

1 -

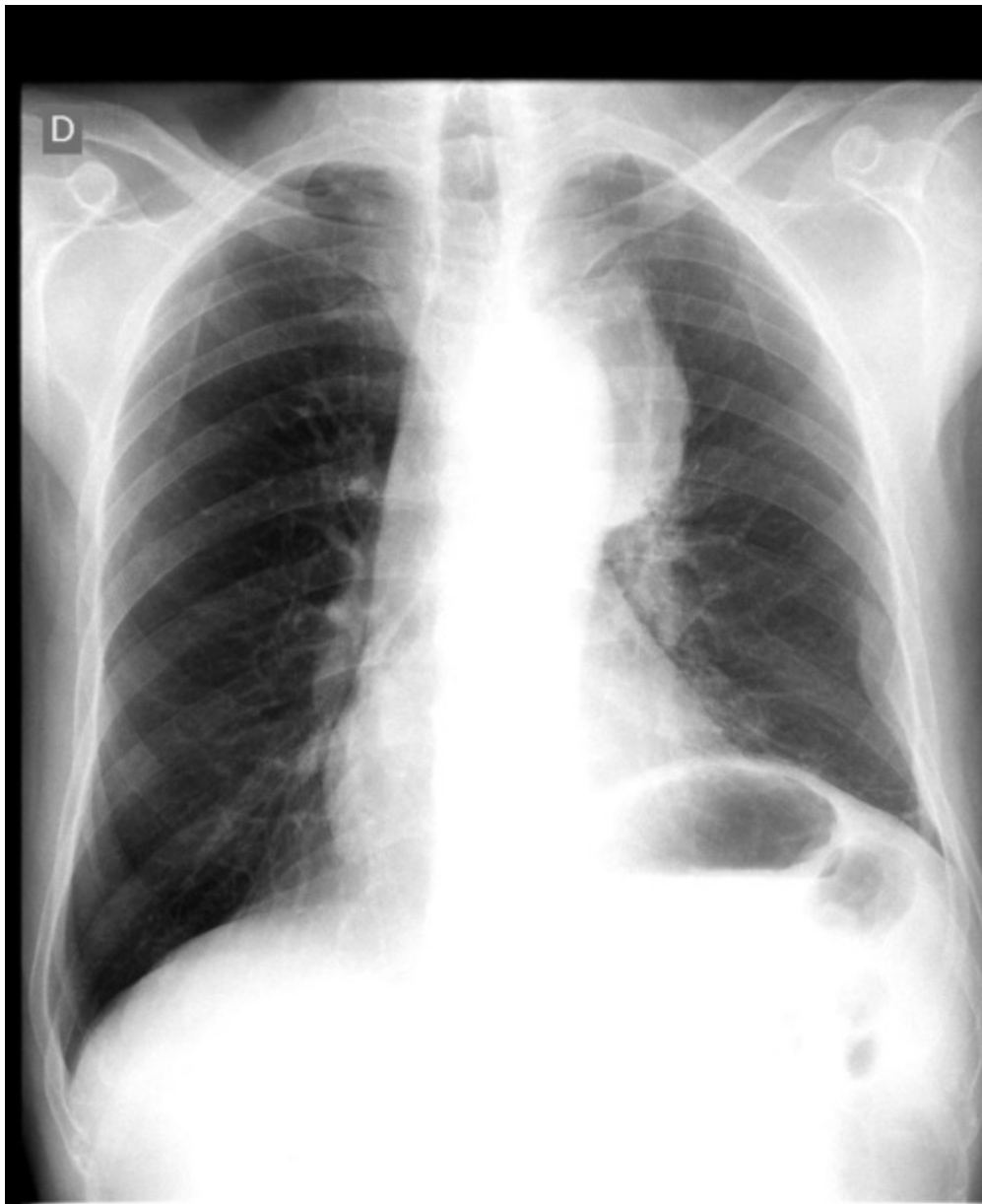
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On examination you note a left-sided partial ptosis. The patient also complains of double vision when you are assessing eye movements. Sustained upward gaze exacerbates his ptosis.

A chest x-ray is requested:



© Image used on license from Radiopaedia



What is the most likely diagnosis?

	Lung cancer
	Cardiac myxoma
	Tuberculosis
	Sarcoidosis
	Thymoma

Dashboard

Overall score: **0%**

1 -

□ Question 14 of 57



A 50-year-old lady is seen in the Emergency Department with abdominal pain and vomiting. She has had generalised colicky abdominal pain, worst in the centre of her abdomen, for the last 2 days. She started vomiting six hours ago and has been unable to keep fluids down. She has not opened her bowels for 3 days and her abdomen has become distended. She does not recall passing flatus today.

She is known to have ovarian cancer with metastases to her bones, liver and peritoneum. She has had a previous abdominal hysterectomy and bilateral salpingoophorectomy and two previous courses of chemotherapy. She has no other past medical history.

On examination she has a diffusely tender tympanic abdomen with no rebound or guarding. She has palpable peritoneal nodules, a 2 cm liver edge and mild shifting dullness. Bowel sounds are hyperactive. She has reduced air entry at both lung bases and mild ankle oedema.

An abdominal x-ray demonstrates dilated loops of small bowel and evidence of ascites. A CT scan of the abdomen with contrast shows small bowel obstruction with an ileal transition point adjacent to a site of peritoneal metastasis. Her liver lesions appear stable and there is no evidence of ureteric obstruction.

An NG tube is inserted and she is started on intravenous fluids and analgesia.

Which is the best initial measure to help resolve the obstruction?

	Bowel rest alone
	Dexamethasone
	Chemotherapy
	Metoclopramide
	Surgery

Overall score: **0%**

1 -

□ Question 14 of 57



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Dashboard

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□ Question 14 of 57



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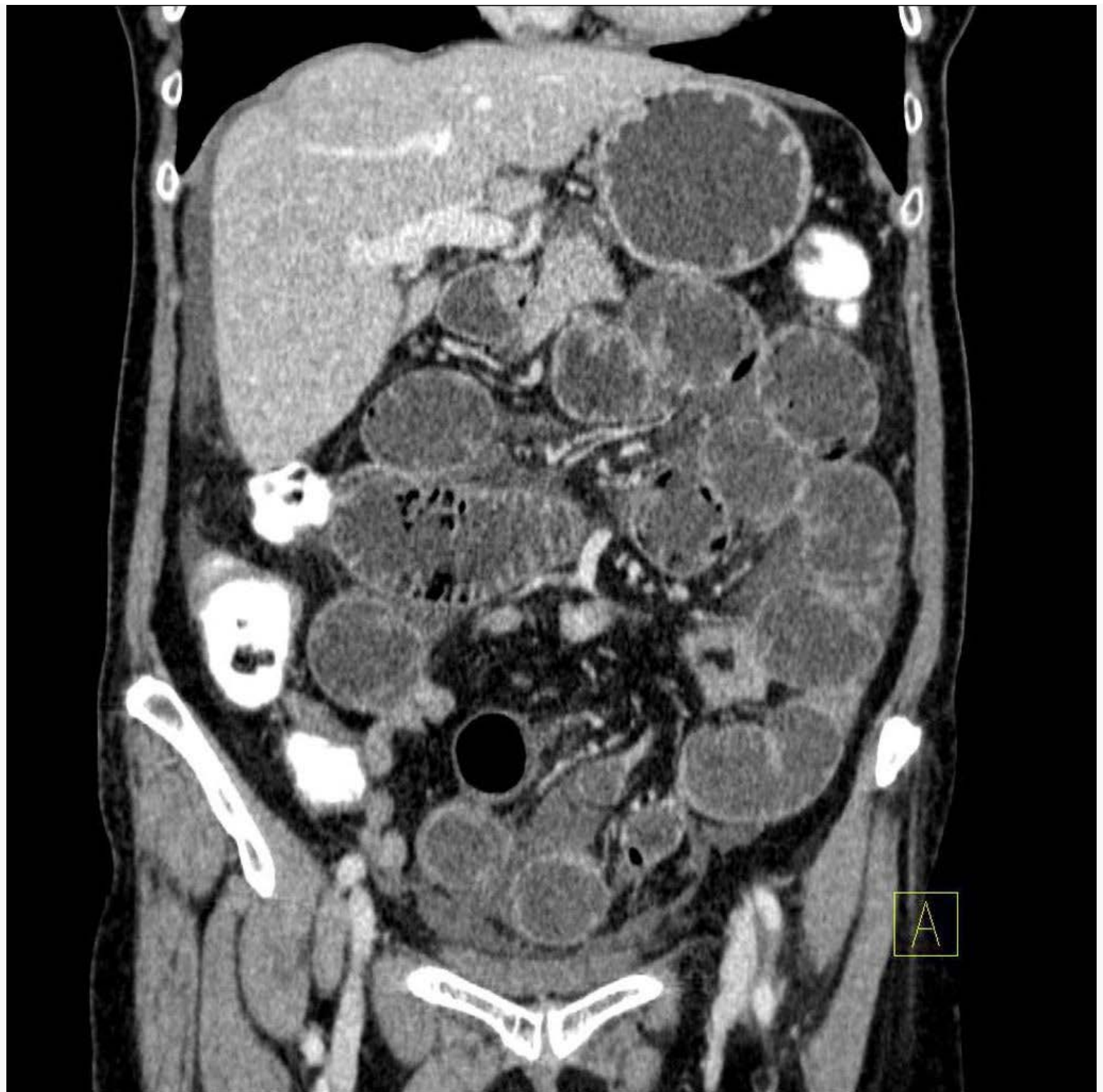
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Which is the best initial measure to help resolve the obstruction?

	Bowel rest alone
	Dexamethasone
	Chemotherapy
	Metoclopramide
	Surgery

Dashboard

Overall score: **0%**



□ Question 15 of 57



A 20 year old asymptomatic woman is referred to the genetics clinic. Her grandmother died of breast cancer aged 54 and her mother and older sister have both recently been diagnosed with the disease.

Breast examination does not reveal any lumps and her recent ultrasound of the breasts did not reveal any suspicious lesions.

What should she be told about her breast cancer risk?

	Her chance of having a BRCA1 mutation is 55-65%
	Her chance of having a BRCA2 mutation is 55-65%
	If BRCA1 positive, she has a 55-65% chance of developing breast cancer
	If BRCA2 positive, she has a 55-65% chance of developing breast cancer
	Given her family history, she has a 55-65% chance of developing breast cancer

Dashboard

Overall score: 0%

1 -

□ Question 15 of 57



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	If BRCA2 positive, she has a 55-65% chance of developing breast cancer
	Given her family history, she has a 55-65% chance of developing breast cancer

Dashboard

Overall score: **0%**

1 -

Question 16 of 57

□ □

A 68-year-old lady attends for review in the oncology clinic. She has advanced oestrogen receptor positive, HER2 negative breast cancer, with metastasis to her ribs, thoracic vertebrae and right humerus. She previously underwent right mastectomy and first line chemotherapy but has declined further chemotherapy.

She has had back and rib pain which was improved by external beam radiotherapy. She was started on alendronate to help prevent pathological fractures but has since suffered nausea, severe acid reflux and epigastric discomfort not helped by a proton pump inhibitor. Her alendronate was stopped and risedronate was trialled but resulted in similar effects and so was also discontinued.

What is the most appropriate medication to prescribe this lady to help prevent skeletal related events?

	Denosumab
	Lapatinib
	Letrozole
	Strontium
	Trastuzumab

Dashboard

Overall score: 0%

1 -

Question 16 of 57

□ □

A 68-year-old lady attends for review in the oncology clinic. She has advanced oestrogen receptor positive, HER2 negative breast cancer, with metastasis to her ribs, thoracic vertebrae and right humerus. She previously underwent right mastectomy and first line chemotherapy but has declined further chemotherapy.

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	Lapatinib
	Letrozole
	Strontium
	Trastuzumab

Dashboard

Overall score: **0%**

1 -

□ Question 17 of 57



A 24-year-old man was referred to clinic with an enlarged testicle. The patient reports that he was examining himself in the shower last week and noticed that his left testicle was markedly larger than the right. He has no specific symptoms, but does describe 4kg weight loss in the last 4 months, which he had previously attributed this to a new diet. Furthermore, he has also suffered with general fatigue over the last month.

He has no past medical history and takes no regular medication. In terms of social history, he is sexually active with his partner, with whom he has been in a relationship for 3 years now. He does not drink alcohol and smoke, and denies any recreational drug use.

There are no other symptoms of note on systems enquiry.

Other than an enlarged, non-tender, left testicle, clinical examination did not reveal any abnormality. Specifically, there was no palpable lymphadenopathy and no gynaecomastia.

What is the most appropriate next step in evaluating this patient?

<input type="checkbox"/>	Ultrasound testes
<input type="checkbox"/>	Lactate dehydrogenase
<input type="checkbox"/>	MRI testes
<input type="checkbox"/>	α -FP
<input type="checkbox"/>	β -hCG

Dashboard

Overall score: 0%

1 -

☐ Question 17 of 57

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<input type="checkbox"/>	Lactate dehydrogenase
<input type="checkbox"/>	MRI testes
<input type="checkbox"/>	α -FP
<input type="checkbox"/>	β -hCG

Dashboard

Overall score: **0%**

1 -

□ Question 18 of 57



A 57 year old female presents after noticing a lump in her neck. She reports it being non-tender and she is only concerned about it for cosmetic purposes. She reports no other symptoms. Her past medical history includes hypertension and constipation. Her current medications include ramipril, irbesartan, amlodipine and furosemide. No family history is unavailable. On examination, her neck lump is hard, non-tender and measures 2cm by 1 cm, moves with swallowing but not with tongue protrusion. Her heart rate is 84 beats/min and blood pressure 213/130 mmHg. Examination of her joints was unremarkable with no excessive laxity.

Her blood tests are as follows:

Hb	11.2 g/dl
Platelets	$349 \times 10^9/l$
WBC	$7.2 \times 10^9/l$
Na ⁺	138mmol/l
K ⁺	4.2 mmol/l
Urea	6.9 mmol/l
Creatinine	72 μ mol/l
Adjusted calcium	3.1 mmol/l
Phosphate	0.40 mmol/l

She undergoes an outpatient ultrasound and fine needle aspiration of her neck lump. After her procedure, the recovery nurses were concerned regarding her persistent hypertension and the patient is admitted for further investigation. She develops a mild headache with no visual disturbances, resolving on its own after her blood pressure falls to 182/101 mmHg two hours later. Urinary metanephrine collection was positive.

Which investigation is likely to produce the underlying diagnosis?

	Genetic testing for RET mutation

	Genetic testing for germline VHL mutation
	Genetic testing for NF2 mutation on chromosome 22
	CT chest/abdomen/pelvis with contrast
	Urinary calcium collection

Dashboard

Overall score: **0%**
1 -

□ Question 18 of 57



A 57 year old female presents after noticing a lump in her neck. She reports it being non-tender and she is only concerned about it for cosmetic purposes. She reports no other symptoms. Her past medical history includes hypertension and constipation. Her current medications include ramipril, irbesartan, amlodipine and furosemide. No family history is unavailable. On examination, her neck lump is hard, non-tender and measures 2cm by 1 cm, moves with swallowing but not with tongue protrusion. Her heart rate is 84 beats/min and blood pressure 213/130 mmHg. Examination of her joints was unremarkable with no excessive laxity.

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Which investigation is likely to produce the underlying diagnosis?

Genetic testing for RET mutation

	Genetic testing for germline VHL mutation
	Genetic testing for NF2 mutation on chromosome 22
	CT chest/abdomen/pelvis with contrast
	Urinary calcium collection

Dashboard

Overall score: **0%**
1 -

□ Question 18 of 57



A 57 year old female presents after noticing a lump in her neck. She reports it being non-tender and she is only concerned about it for cosmetic purposes. She reports no other symptoms. Her past medical history includes hypertension and constipation. Her current medications include ramipril, irbesartan, amlodipine and furosemide. No family history is unavailable. On examination, her neck lump is hard, non-tender and measures 2cm by 1 cm, moves with swallowing but not with tongue protrusion. Her heart rate is 84 beats/min and blood pressure 213/130 mmHg. Examination of her joints was unremarkable with no excessive laxity.

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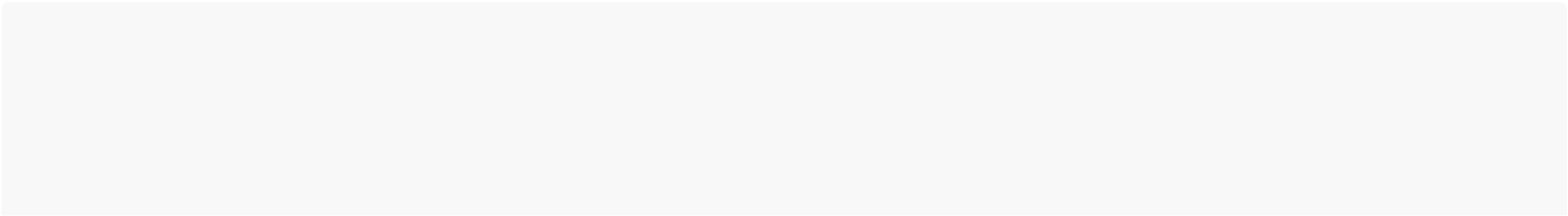
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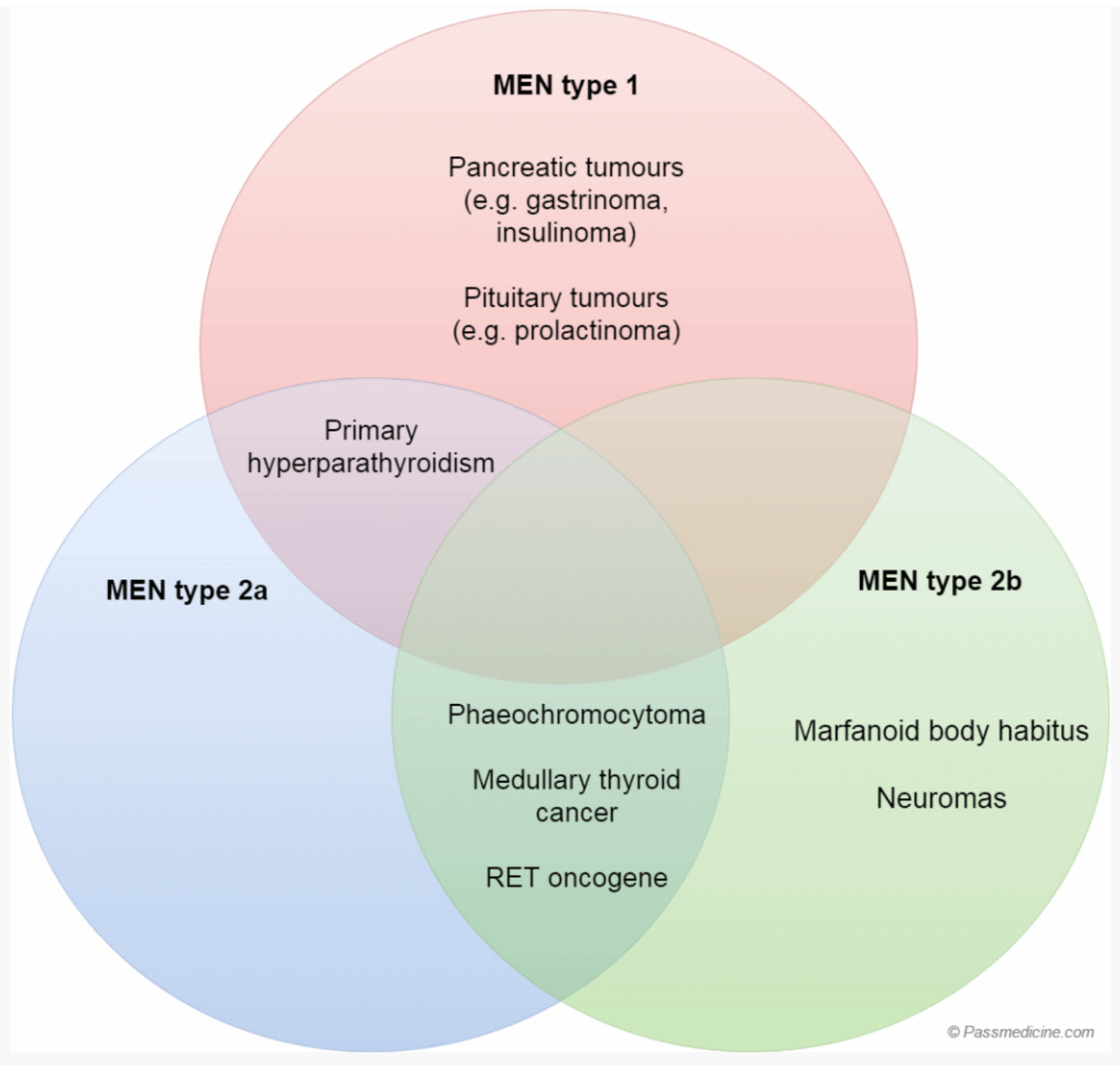
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	Genetic testing for NF2 mutation on chromosome 22
	CT chest/abdomen/pelvis with contrast
	Urinary calcium collection

Dashboard

Overall score: **0%**
1 -





□ Question 19 of 57



A 67-year-old woman presents to the emergency department with a swollen face and shortness of breath. The swelling of her face has progressed over several weeks, but only recently has she noticed a headache, nausea and shortness of breath. She finds her symptoms bother her especially when leaning forward, but are otherwise manageable. On further questioning, she also describes feeling feverish at night and weight loss of six pounds over the last few months. She has a past medical history of COPD, depression and hypertension. She is an ex-smoker of 25 pack-years with no current alcohol intake.

On examination, she has distended veins over her neck, chest and abdomen. Her face appears swollen. A 2cm supra-clavicular is palpable on the right side. A CT scan of her chest demonstrates infra-azygous obstruction of the superior vena cava secondary to a 34mm lymph node which is reported to be suspicious of malignancy.

Observations:

Saturations	96%
Respiratory rate	18/min
Blood pressure	123/65mmHg
Heart rate	68/min
Temperature	36.8°C

What is the most appropriate immediate management plan?

	Dexamethasone
	Emergency radiotherapy
	Biopsy of the 2cm supraclavicular lymph node
	Biopsy of the 34mm intra-thoracic lymph node
	Urgent endovascular stent of the superior vena cava

Dashboard

Overall score: **0%**

1 -

□ Question 19 of 57



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	Biopsy of the 2cm supraclavicular lymph node
	Biopsy of the 34mm intra-thoracic lymph node
	Urgent endovascular stent of the superior vena cava

Dashboard

Overall score: **0%**

1 -

□ Question 20 of 57



A 53-year-old man is admitted to the Emergency Department complaining of a 'chest infection'. His symptoms have not improved despite a course of antibiotics from his GP. The admission chest x-ray is shown below:



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Which investigation is most likely to reveal the diagnosis?

	HIV test
	CT abdomen
	Testicular ultrasound

	Bronchoscopy
	Sputum culture

Dashboard

Overall score: **0%**
1 -

Question 20 of 57



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Dashboard

Overall score: **0%**
1 -

□ Question 20 of 57

□ □

A 53-year-old man is admitted to the Emergency Department complaining of a 'chest infection'. His symptoms have not improved despite a course of antibiotics from his GP. The admission chest x-ray is shown below:



© Image used on license from Radiopaedia

Which investigation is most likely to reveal the diagnosis?

HIV test

CT abdomen

	Testicular ultrasound
	Bronchoscopy
	Sputum culture

Dashboard

Overall score: **0%**
1 -

op



Question 21 of 57

□ □

A 60-year old lady originally presented with diarrhoea and flushing 8 months ago and was diagnosed with carcinoid syndrome. She was managed medically with Octreotide and had been stable but her concerned daughter brought her today in with confusion, she seems to be seeing things and her diarrhoea was becoming a problem again. She also had an itchy rash predominantly on the back of her hands and around her neck. The GP had suggested emollients and topical corticosteroids but this had made no improvement. On examination there was an erythematous, scaly rash on the dorsum of both hands and around the neck, she had an abbreviated mental test score (AMTS) of 4/10 with no other positive findings.

What is the most likely diagnosis?

	Irritant contact dermatitis
	Brain metastases
	Dermatomyositis
	Beriberi
	Pellagra

Dashboard

Overall score: 0%

1 -

Question 21 of 57

□ □

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What is the most likely diagnosis?

	Irritant contact dermatitis
	Brain metastases
	Dermatomyositis
	Beriberi
	Pellagra

Dashboard

Overall score: **0%**

1 -

□ Question 22 of 57



A 47-year-old woman presents to the emergency department with sudden onset of shortness of breath and pleuritic chest pain. Observations demonstrate marked hypoxia and she is given oxygen and analgesia and undergoes a chest X-ray followed by a CT pulmonary angiogram which demonstrates a pulmonary embolism. There is also an incidental finding of a nodule suspicious of metastatic disease.

She is started on treatment dose of low molecular weight heparin and admitted under the medical team for further assessment. During a more detailed history she explains that she has lost one stone in weight over two months and been feeling progressively more tired as well. She denies any other symptoms. She has a past medical history of asthma and also underwent a caesarean section three years ago. She has two children, of which she breastfed both, and has a long history of use of oral contraceptive use. She is an ex-smoker of 5 pack-years and has minimal alcohol intake. Her grandfather died of prostate cancer, and her sister developed breast cancer at the age of 52.

A complete further examination was completed and no abnormalities were found. Routine blood tests are currently pending, and a flexible bronchoscopy for biopsy of the lung nodule has been arranged. How should this patient be further investigated?

<input type="checkbox"/>	Tumour markers AFP and hCG, and mammography
<input type="checkbox"/>	CT abdomen and pelvis, tumour markers AFP and hCG, and a myeloma screen
<input type="checkbox"/>	Ultrasound abdomen and pelvis, and tumours marker AFP and hCG
<input type="checkbox"/>	CT abdomen and pelvis, and tumour markers AFP and hCG
<input type="checkbox"/>	CT abdomen and pelvis, myeloma screen, and colonoscopy

Dashboard

Overall score: 0%

1 -

Question 22 of 57



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	Ultrasound abdomen and pelvis, and tumours marker AFP and hCG
	CT abdomen and pelvis, and tumour markers AFP and hCG
	CT abdomen and pelvis, myeloma screen, and colonoscopy

Dashboard

Overall score: **0%**

1 -

Question 23 of 57

□ □

You are asked to review a 78 year-old male on the respiratory ward during a night shift. He is currently an inpatient being treated for an infective exacerbation of pulmonary fibrosis. You review his chest X-Ray which shows extensive left sided consolidation. His co-morbidities include end-stage renal failure (haemodialysis dependent) secondary to type 1 diabetes mellitus. He escalation plan has been discussed previously and he did not want escalation to ICU or CPR in the event of a cardiac arrest.

He has been treated with high flow oxygen and intravenous antibiotics for the past few days but nursing staff inform you he has been deteriorating in the last 24 hours. On examination he is very dyspnoeic and distressed with saturations of 72% on 80% high flow humidified oxygen.

What is the correct course of action?

	Increase the inspired oxygen concentration
	2.5mg midazolam subcutaneously
	2.5mg morphine subcutaneously
	5mg morphine orally
	100mcg alfentanil subcutaneously

Dashboard

Overall score: 0%

1 -

Question 23 of 57

□ □

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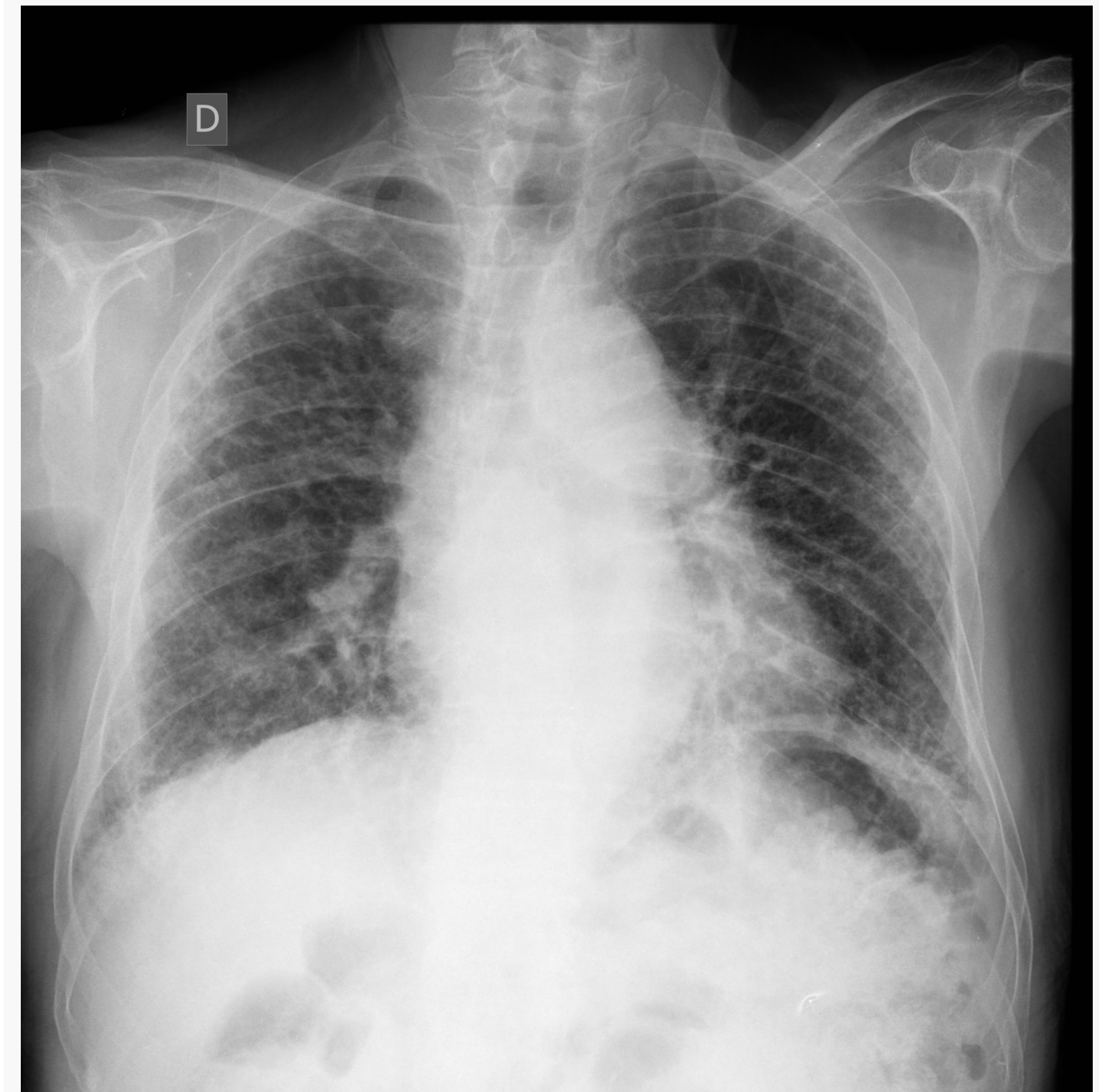
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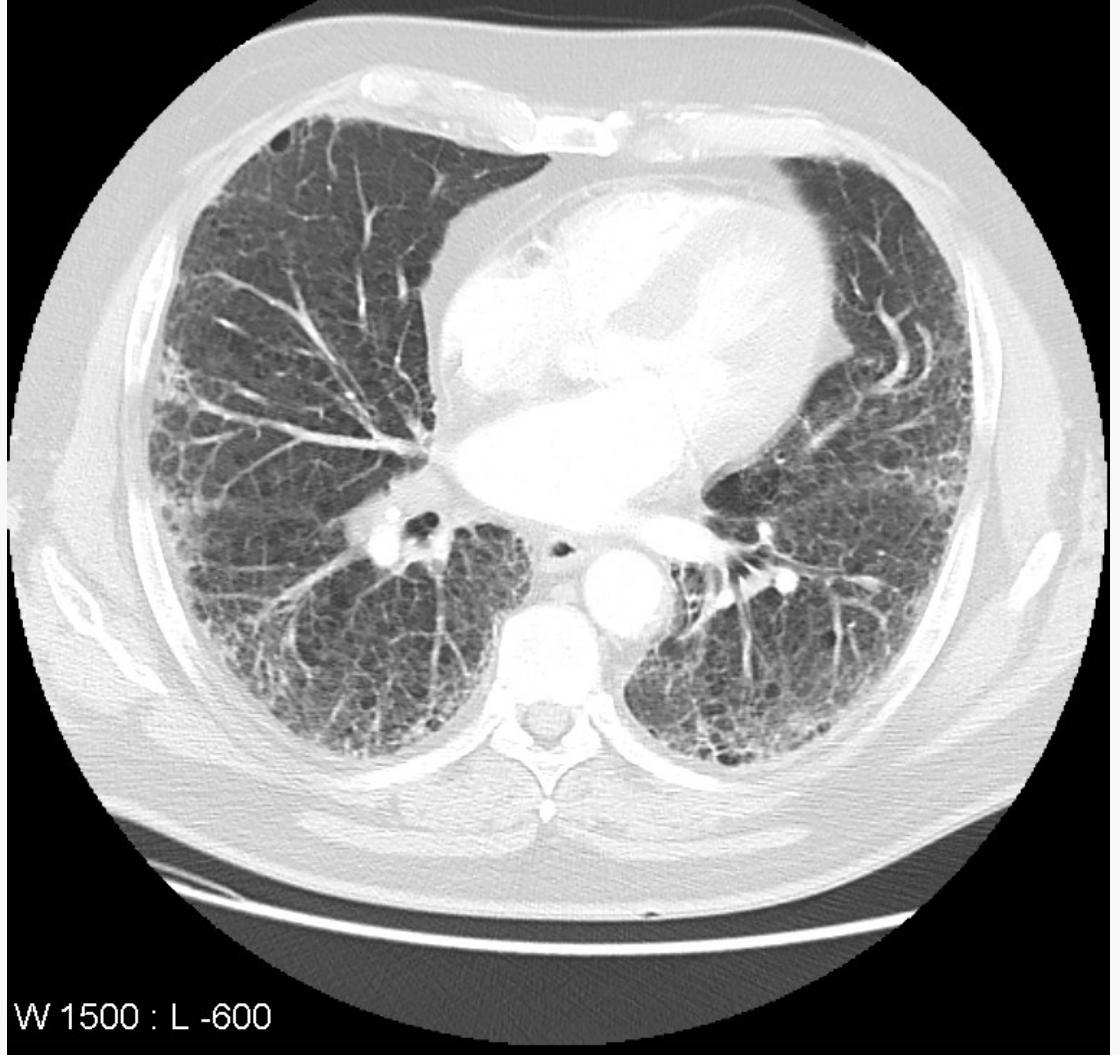
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Dashboard

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1 -



Question 24 of 57



A 72-year-old Indian male presents with left loin pain and occasional frank haematuria. He reports the symptoms started 2 months ago during a visit to Mumbai but have been getting progressively worse over the past 4 days. He also reports gradual weight loss and reduced appetite as well as a non-productive cough .

His past medical history includes type 2 diabetes mellitus, hypertension and hypercholesterolaemia. On examination, his temperature is 37.8 degrees and he is haemodynamically stable.

Abdominal examination reveals a significant swelling in his left scrotum, which does not empty on lying flat. The abdomen is otherwise soft and bowel sounds are present are normal. Lastly, bilateral lower limb swelling is noted to the top of both thighs. A urine dip reveals pH 6.5 4+ blood 1+ protein 1+ leucocyte 1+ nitrite. An initial chest radiograph reveals multiple round opacities in both lung fields. Blood tests are awaited.

Which investigation is most likely to reveal the underlying diagnosis?

	CT abdomen with contrast
	Three sets of blood cultures
	Urinary protein-creatinine ratio
	Ultrasound testes
	Urine acid fast bacilli culture

Dashboard

Overall score: 0%

1 -

Question 24 of 57



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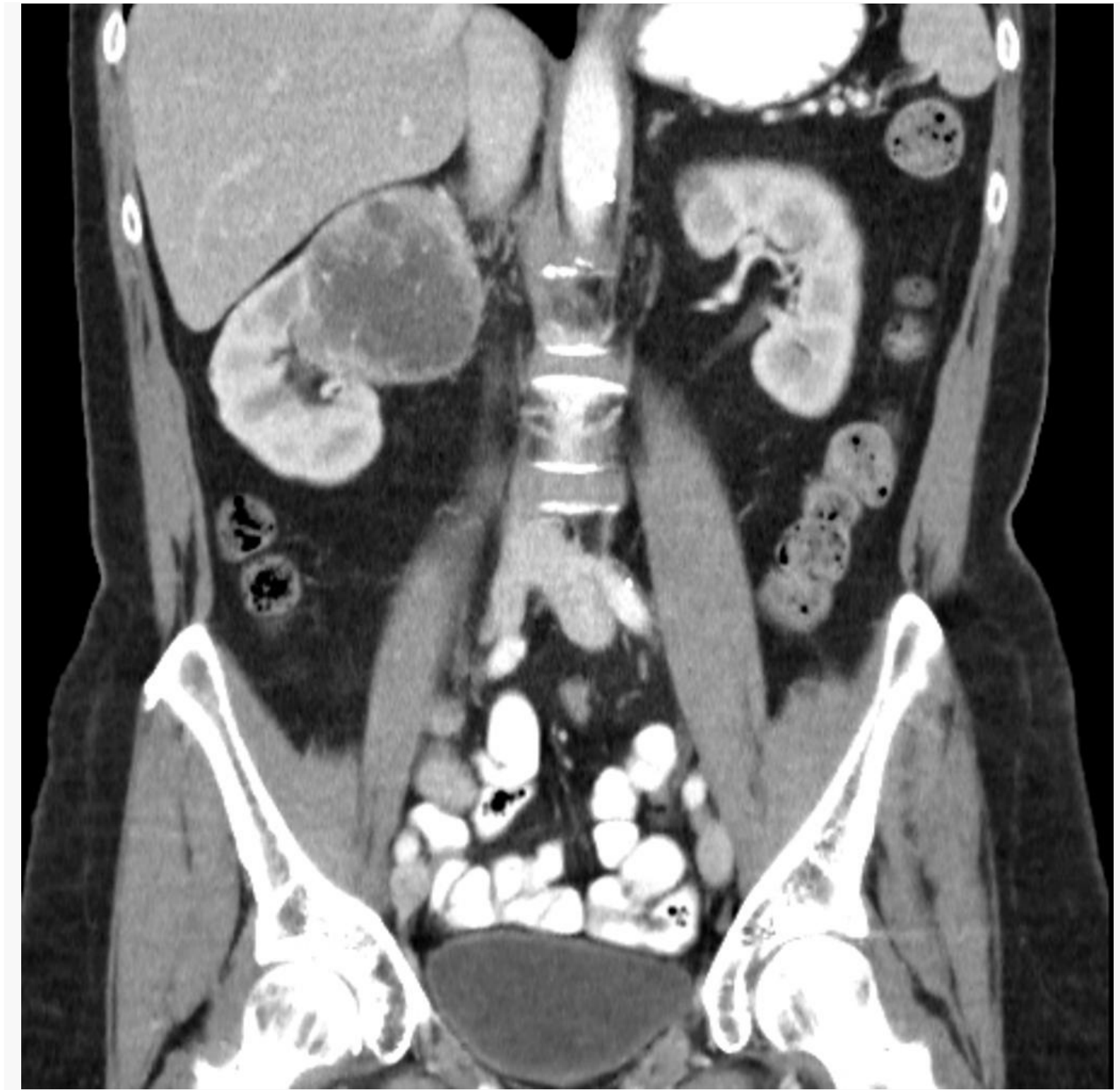
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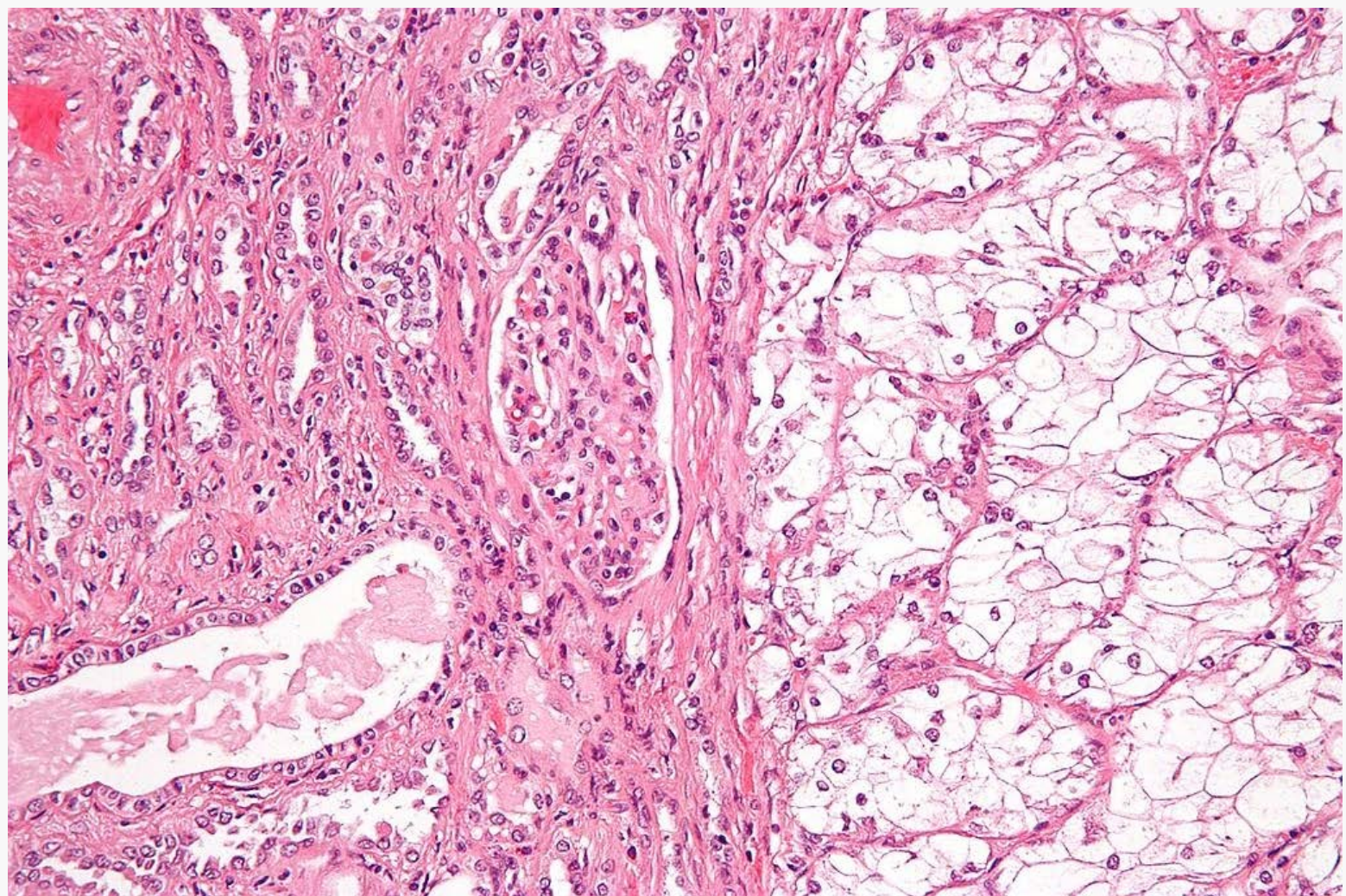
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Dashboard

Overall score: 0%

1 -



Question 24 of 57

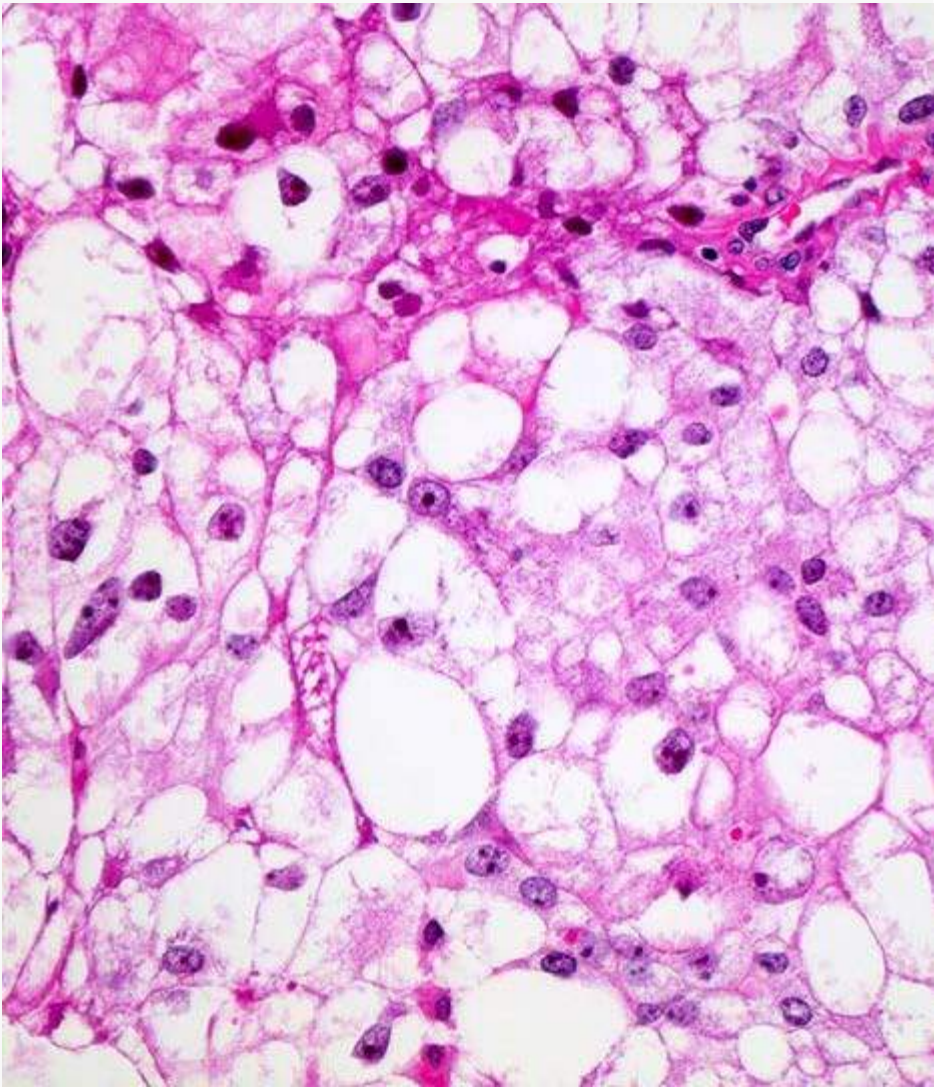
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His past medical history includes type 2 diabetes mellitus, his temperature is 37.8 degrees and he is haemodynamically stable

Abdominal examination reveals a significant swelling in the right upper abdomen is otherwise soft and bowel sounds are normal at top of both thighs. A urine dip reveals pH 6.5 4+ proteinuria reveals multiple round opacities in both lung fields

Which investigation is most likely to reveal the cause of his symptoms?

	CT abdomen with contrast
	Three sets of blood cultures
	Urinary protein-creatinine ratio
	Ultrasound testes
	Urine acid fast bacilli culture



□ Question 25 of 57



A 54-year-old gentleman is reviewed 48 hours after being admitted to his local hospital with neutropaenic sepsis. He measured his temperature at home found it to be 38.2°C. Because of this, he called the chemotherapy helpline and he was advised to attend the emergency department who promptly admitted him under the care of the medical team.

He has a background of metastatic colorectal cancer and he has had chemotherapy ten days ago. He was started on piperacillin with tazobactam on admission. His temperature settled within 12 hours and investigations, including blood cultures, a chest X-ray, urine testing and a thorough examination did not find any source of infection. His initial neutrophil count was $0.4 \times 10^9/\text{l}$. Recent blood tests demonstrate a neutrophil count of $0.5 \times 10^9/\text{l}$. His vital parameters have all been normal since his temperature settled and he has not noticed any symptoms at any point.

What is the most appropriate management plan?

	Convert patient to oral antibiotics and discharge
	Keep on IV antibiotics in hospital until full course completed
	Monitor neutrophil count in hospital and discharge when greater than $1 \times 10^9/\text{l}$
	Arrange for outpatient IV antibiotics
	Change piperacillin with tazobactam to meropenem

Dashboard

Overall score: 0%

1 -

□ Question 25 of 57



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	Arrange for outpatient IV antibiotics
	Change piperacillin with tazobactam to meropenem

Dashboard

Overall score: 0%

1 -

Question 26 of 57

□ □

A 45-year-old lady presented to clinic with a four-month history of worsening cough with blood-stained sputum and exertional dyspnoea. She reported having lost over 8 kg in weight during this time, with a reduced appetite. She started smoking as a teenager and currently has 15 cigarettes daily. She has been diagnosed with small cell lung cancer. Her staging CT reveals a classification of T1a N2 M0. She attends for a follow-up appointment to see you in the oncology clinic. Which of the following treatment options should be considered first line?

	Pembrolizumab
	Cisplatin
	Consider surgery
	Thoracic radiotherapy
	Palliation of symptoms

Dashboard

Overall score: 0%

1 -

Question 26 of 57

□ □

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Dashboard

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1 -

□ Question 26 of 57

□ □

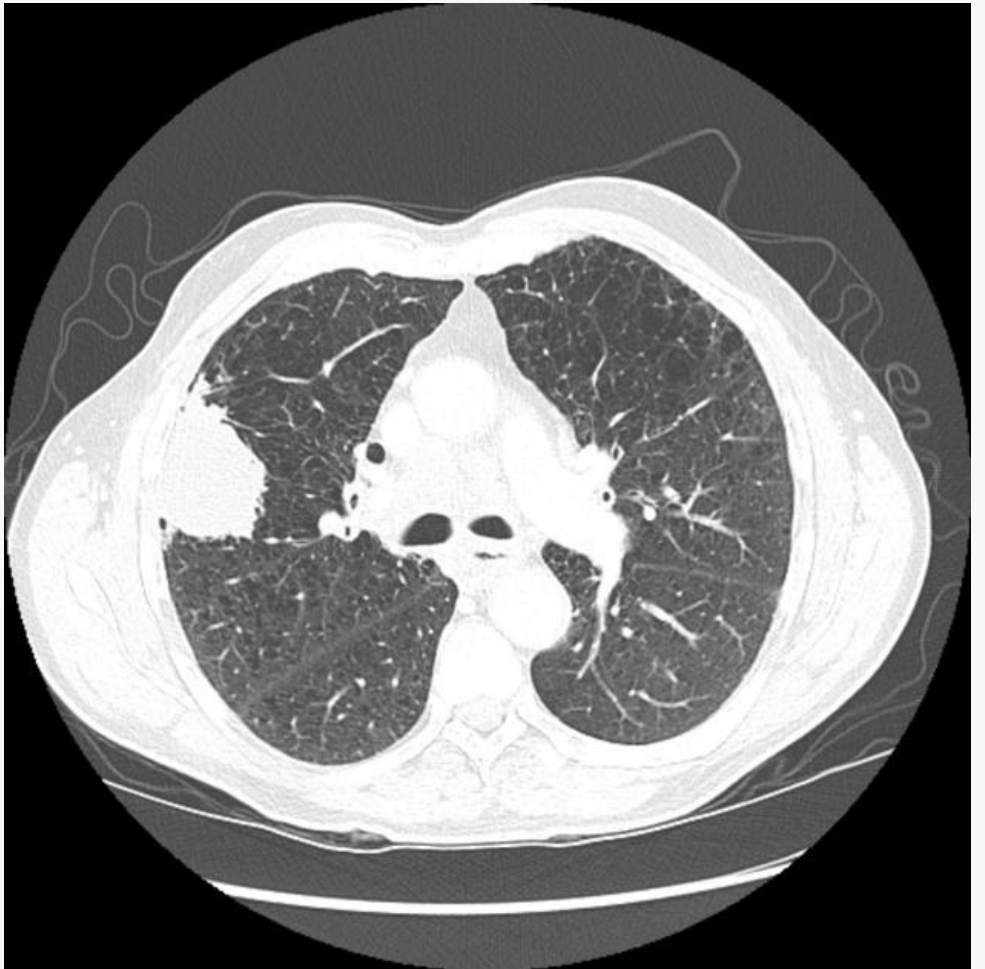
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	Pembrolizumab
	Cisplatin
	Consider surgery
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Dashboard

Overall score: 0%

1 -



□ Question 27 of 57



A 28 year old male is referred to endocrinology outpatient clinic for 3 months of increasing anxiety, weight loss and palpitations. His GP suspects hyperthyroidism and would appreciate your review. He has no past medical history except a fibula fracture sustained playing football aged 14 and a right orchidoplexy aged 11. On examination, he looks anxious with bilateral sweaty palms. His BMI is 13.8 kg/m² and you note a sinus tachycardia of 120 beats per minute with a systolic murmur. No neck swelling can be visualized or palpated.

His blood tests are as follows:

Hb	14.7 g/dl
Platelets	278 * 10 ⁹ /l
WBC	8.9 * 10 ⁹ /l
Na ⁺	141 mmol/l
K ⁺	3.8 mmol/l
Urea	4.5 mmol/l
Creatinine	47 µmol/l
TSH	< 0.01 mu/l
Free T4	33.3 pmol/l (normal 10-24)
Beta HCG	16000 (normal range < 5 mIU/ml for men)

What is the most appropriate next investigation?

	Ultrasound neck +/- fine needle aspiration
	Serum anti-thyroid peroxidase antibodies
	Serum free T3

	Serum FSH and LH
	Ultrasound testes

Dashboard

Overall score: **0%**
1 -

□ Question 27 of 57



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	Serum FSH and LH
	Ultrasound testes

Dashboard

Overall score: **0%**
1 -

Question 28 of 57



A 62-year-old lady with metastatic breast cancer is admitted with a general decline. She is found to have a pneumonia and treated with IV fluids and antibiotics. She makes limited improvement with these and antibiotics are stopped. The decision is made to focus on control of her symptoms.

She is started on a syringe driver of morphine sulphate to treat breathlessness and pain related to liver metastases. She then develops nausea and hiccups.

Which medication is the best choice to add to the syringe driver?

	Cyclizine
	Domperidone
	Midazolam
	Metoclopramide
	Ondansetron

Dashboard

Overall score: 0%

1 -

Question 28 of 57

□ □

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Dashboard

Overall score: **0%**

1 -

□ Question 29 of 57



A 47-year-old man is referred to the respiratory clinic with a 3 month history of cough associated with retrosternal chest pain. A chest x-ray requested by his GP has been reported as abnormal.

The chest x-ray is shown below



© Image used on license from Radiopaedia



What is the most likely diagnosis?

	Oesophageal cancer
	Cardiac myxoma
	Thymoma
	Lung cancer
	Sarcoidosis

Dashboard

Overall score: 0%

1 -

□ Question 29 of 57



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© Image used on license from Radiopaedia



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Dashboard

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□ Question 29 of 57

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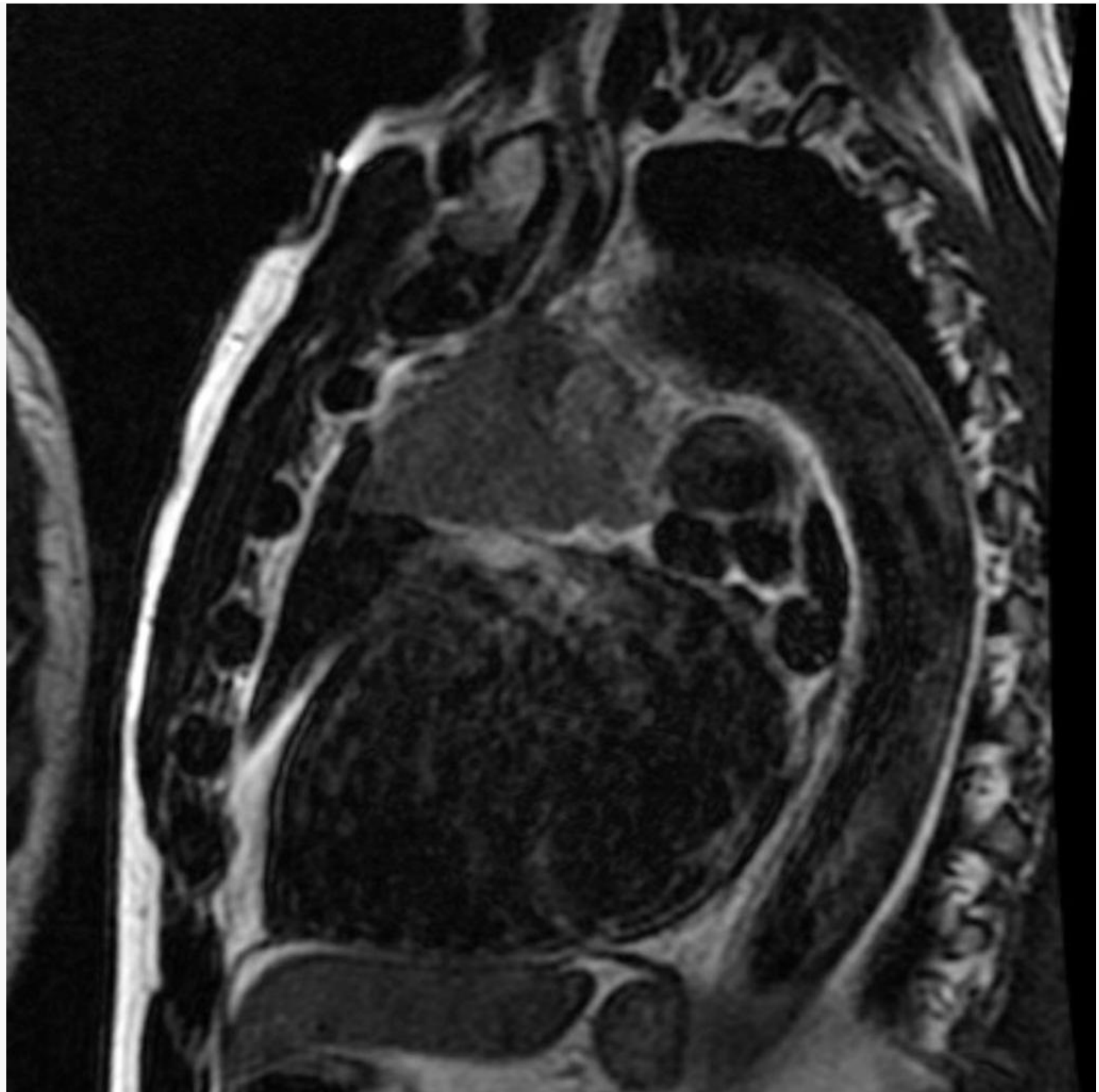


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Dashboard

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1 -



□ Question 29 of 57

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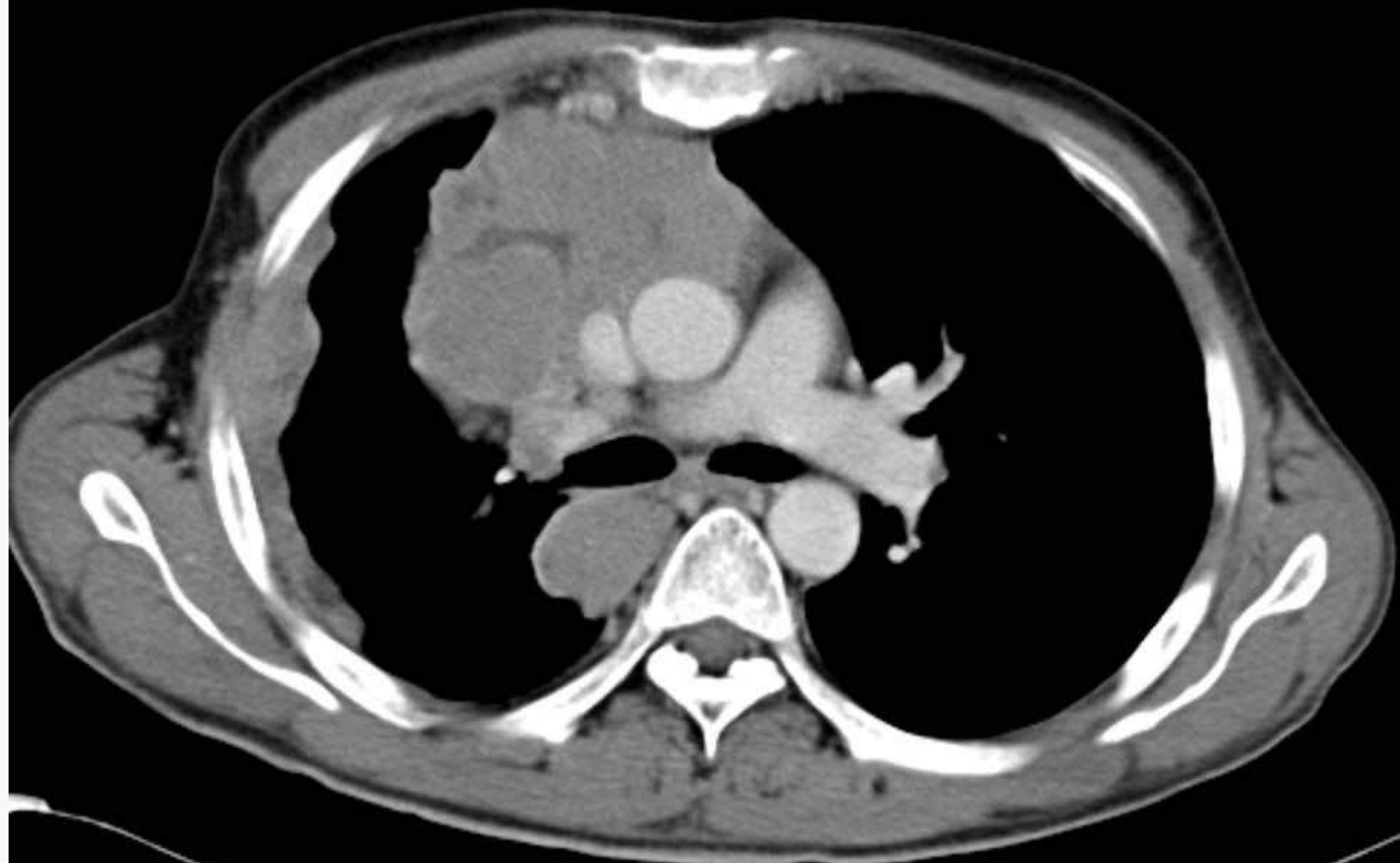
	Oesophageal cancer
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	Lung cancer
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Dashboard

Overall score: **0%**

1 -

Warning: Not for diagnostic use



Question 30 of 57

A 63-year-old woman presents with unrelenting thoracic back pain. She finds that the pain is debilitating, especially as she helps look after her grandchildren. She has a past medical history of breast cancer diagnosed two years ago, for which she underwent a mastectomy with reconstruction. She also had postoperative radiotherapy and endocrine therapy. As she was found to be BRCA1 positive, she underwent a hysterectomy with bilateral oophorectomy as well. On examination, she is tender over the spine at T4, but neurological examination is unremarkable. What is the most appropriate imaging investigation for her back pain?

<input type="radio"/>	MRI of the whole spine within 7 days
<input type="radio"/>	MRI of the thoracic spine within 7 days
<input type="radio"/>	MRI of the whole spine within 24 hours
<input type="radio"/>	MRI of the thoracic spine within 24 hours
<input type="radio"/>	Bone scan of the whole body within 7 days

Dashboard

Overall score: 0%

1 -

□ Question 30 of 57

□ □

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	MRI of the whole spine within 7 days
	MRI of the thoracic spine within 7 days
	MRI of the whole spine within 24 hours
	MRI of the thoracic spine within 24 hours
	Bone scan of the whole body within 7 days

Dashboard

Overall score: **0%****1** -

□ Question 31 of 57



A 37-year-old woman is referred by her GP after complaining of a swelling on the anterior aspect of her neck. On examination she is found to have a 2 cm nodule on the thyroid gland that moves on swallowing.

She has a past medical history of anxiety/depression and currently takes sertaline 100mg od. Her mother was diagnosed as having hypothyroidism in her 60's.

Thyroid functions tests are shown below:

Free T4	14 pmol/l
TSH	2.6 mu/l

A fine needle aspiration of the mass is consistent with papillary thyroid cancer. There is no current evidence of metastases. What is the most appropriate treatment?

	Total thyroidectomy followed by radioiodine-131
	Localised radiotherapy
	Total thyroidectomy
	Total thyroidectomy followed by localised radiotherapy
	Radioiodine-131

Dashboard

Overall score: 0%

1 -

□ Question 31 of 57



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TSH	2.6 mu/l

A fine needle aspiration of the mass is consistent with papillary thyroid cancer. There is no current evidence of metastases. What is the most appropriate treatment?

	Total thyroidectomy followed by radioiodine-131
	Localised radiotherapy
	Total thyroidectomy
	Total thyroidectomy followed by localised radiotherapy
	Radioiodine-131

Dashboard

Overall score: 0%

1 -

□ Question 32 of 57



A medical consult was sought regarding a 58-year-old gentleman admitted with pneumonia complaining of relentless hiccups. He was diagnosed with hepatocellular carcinoma six months ago and was deemed not for curative treatment owing to the extent of the disease. He was initially comfortable with no discernible symptoms but over the last four weeks developed hiccups. In conjunction with the palliative care nurse his GP had initially trialed domperidone and then haloperidol but with no improvement in his symptoms. He denied the presence of any other symptoms other than fatigue, and upon questioning denied the presence of abdominal pain, heartburn or early satiety.

His past medical history was comprised of alcohol dependence syndrome, chronic liver disease, hypertension and hypercholesterolaemia for which he was prescribed thiamine 100mg TDS, lactulose 10mls BD, spironolactone 100mg OD, propranolol 40mg OD, simvastatin 20mg OD as well as intravenous co-amoxiclav 625mg TDS for the treatment of his pneumonia.

Examination revealed the presence of a cachectic male. His blood pressure was 108/58 mmHg, heart rate 78 bpm, respiratory rate 18/min and temperature 36.6°C. Examination of his gastrointestinal system revealed the presence of a palpable mass in the right upper quadrant inferior to the right sterna edge and ascites with no tenderness. Examination of his neurological system revealed the absence of any focal neurological symptoms; likewise, examination of cardiovascular and respiratory systems was unremarkable.

Recent investigations revealed the following results:

Bilirubin	22 μ mol/l
ALP	221 u/l
ALT	278 u/l
Protein	62 g/l
Albumin	18 g/l

Chest x-ray: normal heart borders and lung fields

Surveillance upper GI endoscopy four months ago: normal stomach mucosal surface, no evidence of portal hypertension

Which of the following options is the best option with a view to managing his hiccups?

	Commence treatment with proton pump inhibitor
	Commence treatment with levomepromazine
	Commence treatment with dexamethasone
	Commence treatment with midazolam infusion
	Commence treatment with baclofen

Dashboard

Overall score: **0%**

1 -

□ Question 32 of 57



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Dashboard

Overall score: **0%**
1 -

□ Question 33 of 57



A 68-year-old man presents with a five-week history of lower back pain that is worse with coughing. He has noticed that he has been requiring more painkillers to the point where he is struggling to manage, especially at night. The pain is worse when straining to pass stool. He lost three kg over the last four months as well. He has a past medical history of COPD, hypertension, type two diabetes mellitus, and hypercholesterolemia. He has been admitted three times in the last year for exacerbations of COPD requiring the recurrent use of oral prednisolone. His regular medications include Symbicort, tiotropium, atorvastatin, metformin, paracetamol, codeine and Movicol. He is an ex-smoker with a 50 pack-year history and recently opted for early retirement from his job as an accountant as he was struggling with tiredness. On examination, he appears tired and his clothes appear loose fitting. Examination of his chest is unremarkable, but there is a 1cm swelling above his left clavicle. His abdomen is soft, there is no tenderness over his spine, and a neurological examination is unremarkable.

Observations:

Saturations	95%
Respiratory rate	15/min
Blood pressure	148/87mmHg
Heart rate	74/min
Temperature	37.4°C

Blood tests:

Hb	128 g/l
MCV	72 fl
Platelets	$327 \times 10^9/l$
WBC	$12.4 \times 10^9/l$
Na ⁺	136 mmol/l
K ⁺	4.2 mmol/l
Urea	4.1 mmol/l

Creatinine	77 µmol/l
------------	-----------

What is the most likely diagnosis that explains his symptoms?

	Osteoporotic vertebral collapse
	Spinal cord metastasis
	Myeloma
	Degenerative changes
	Discitis

Dashboard

Overall score: 0%

1 -

Question 33 of 57



A 68-year-old man presents with a five-week history of lower back pain that is worse with coughing. He has noticed that he has been requiring more painkillers to the point where he is struggling to manage, especially at night. The pain is worse when straining to pass stool. He lost three kg over the last four months as well. He has a past medical history of COPD, hypertension, type two diabetes mellitus, and hypercholesterolemia. He has been admitted three times in the last year for exacerbations of COPD requiring the recurrent use of oral prednisolone. His regular medications include Symbicort, tiotropium, atorvastatin, metformin, paracetamol, codeine and Movicol. He is an ex-smoker with a 50 pack-year history and recently opted for early retirement from his job as an accountant as he was struggling with tiredness. On examination, he appears tired and his clothes appear loose fitting. Examination of his chest is unremarkable, but there is a 1cm swelling above his left clavicle. His abdomen is soft, there is no tenderness over his spine, and a neurological examination is unremarkable.

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	Osteoporotic vertebral collapse
	Spinal cord metastasis
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	Degenerative changes
	Discitis

Dashboard

Overall score: **0%**
1 -

□ Question 34 of 57



A 45-year-old man undergoing chemotherapy mentions to the nurses that he has been feeling unwell for the last two days. He has currently having treatment for metastatic lung cancer. The nurses find that his temperature is 38.2°C. His other observations are stable. He has been having chemotherapy via a peripherally inserted central catheter (PICC). On examination his line site appears normal, his chest is clear and his abdomen is soft and non-tender. What is the most appropriate next step in his management plan?

	Send a full blood count to test neutrophil levels
	Remove the PICC line and then observe if temperature settles
	Remove the PICC line then discharge with IV antibiotics
	Take blood cultures from the PICC line and peripherally then treat with IV antibiotics
	Discharge with oral antibiotics

Dashboard

Overall score: 0%

1 -

□ Question 34 of 57



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Dashboard

Overall score: **0%****1** -

Question 35 of 57

□ □

A 47 year old man attended his GP after checking his blood pressure at the local pharmacy. When he had it checked it was 179/102 mmHg. The GP confirmed it was high in the surgery at 186/103 mmHg. He started him on ramipril 2.5mg and titrated up the dose to 10mg over the next few weeks. His repeat measurements showed consistently high readings so the GP added amlodipine, which had very little effect despite being tolerated at the maximum dose. After failing to get adequate response with addition of a third agent the GP referred the patient to the endocrine clinic.

Observations showed a blood pressure of 190/105 mmHg and a heart rate of 98 beats per minute. On examination the man was thin with a BMI of 23 kg/m². His apex was diffuse and displaced with normal heart sounds. Chest was clear and abdomen was soft and non tender with no evidence of masses or renal bruits. He was noted to have a hard, painless nodule over the thyroid gland.

24 hour urinary catecholamines were raised and further investigations confirmed phaeochromocytoma. He was treated medically with an alpha blocker then beta blocker whilst awaiting surgery. In this period he had further investigation into the thyroid nodule, which was a cold nodule on radionucleotide scanning.

Which type of thyroid cancer would you expect this to be histologically?

	Papillary
	Follicular
	Anaplastic
	Lymphoma
	Medullary

Dashboard

Overall score: 0%

1 -

Question 35 of 57

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Which type of thyroid cancer would you expect this to be histologically?

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<input type="radio"/>	Anaplastic
<input type="radio"/>	Lymphoma
<input checked="" type="radio"/>	Medullary

Dashboard

Overall score: 0%

1 -

Question 36 of 57



A 65-year-old man with metastatic squamous cell lung cancer is admitted to the Acute Medical Unit for the management of hypercalcaemia. He is currently taking slow-release morphine sulphate (MST) 90mg bd to control his pain along with regular naproxen and paracetamol. During his admission he complains of pain in his right arm which is the site of a known skeletal metastasis. What is the most appropriate medication to prescribe to treat his acute pain?

	Oral morphine solution 30mg
	Oral morphine solution 15mg
	Oral morphine solution 10mg
	Add alendronate 70mg weekly
	Tramadol 50mg

Dashboard

Overall score: **0%**

1 -

Question 36 of 57



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	Oral morphine solution 10mg
	Add alendronate 70mg weekly
	Tramadol 50mg

Dashboard

Overall score: **0%**

1 -

Question 37 of 57

A 25 year old male with no significant past medical history presents with a 4 month history of palpitations. Upon further questioning he also notes an unintentional 7 kg weight loss and some heat intolerance over the same time frame.

Clinical examination reveals mild thyromegaly, fine tremor, brisk reflexes, and bilateral lid lag. He does not have any exophthalmos and the rest of the examination is unremarkable. He denies any family history of thyroid disease. He has thyroid function tests which reveal a low Thyroid-stimulating Hormone (TSH), elevated Free thyroxine (FT4) and Free Triiodothyronin (FT3), and negative anti-TPO antibodies. Thyroid uptake scan demonstrates diffusely increased uptake.

At a follow-up visit to discuss the above results he reports that he may have discovered a mass on his testicle. Your exam confirms this finding. At this point, in addition to basic labs and imaging to further evaluate this testicular mass, what laboratory test would be necessary to further evaluate the etiology behind his hyperthyroidism?

	TSH
	Human chorionic gonatropin (hCG)
	Thyroid Stimulating Antibodies
	Lactate Dehydrogenase (LDH)
	Alpha Feto Protein (AFP)

□ Question 37 of 57



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	TSH
	Human chorionic gonatropin (hCG)
	Thyroid Stimulating Antibodies
	Lactate Dehydrogenase (LDH)
	Alpha Feto Protein (AFP)

Dashboard

Overall score: **0%**

1 -

□ Question 38 of 57



A 67-year-old gentleman was admitted to the medical emergency unit with increasing drowsiness. He had been diagnosed with terminal small cell cancer of the lung which had extensively metastasised to his liver, thoracic vertebrae and femur bones. His past medical history was comprised of haemodialysis dependent polycystic kidney disease for which he attends haemodialysis three times a week as well as ischaemic heart disease, hypertension, hypercholesterolaemia and COPD. His main complaint was of progressively worsening pain in his spine and legs. This was particularly bothersome at night; a trial of bisphosphonate therapy and radiotherapy did not provide any symptomatic relief. He was initially commenced on oral morphine sulphate solution which was converted to morphine sulphate tablets (MST); he had been on 80mg BD but this was titrated by the palliative care community nurse to 100mg BD a couple of days prior to admission with excellent analgesic effect. His other prescribed medications included paracetamol 1g QDS, codeine 60mg QDS, aspirin 75mg OD, ramipril 10mg OD, bisoprolol 2.5mg OD, atorvastatin 20mg ON, Seretide 2 puffs BD & salbutamol PRN.

Examination revealed a drowsy gentleman with a GCS of 12 (E 3 M5 V4). His blood pressure was 102/68, heart rate 58bpm, respiratory rate 8/min, oxygen saturations of 95% on air and temperature 36.6°C. Other than bradypnoea, examination of his cardiovascular and respiratory systems was unremarkable. Examination of his central nervous system revealed the presence of pinpoint pupils; he was not compliant with formal neurological examination but no other focal neurological signs were found.

After appropriate inpatient care, his GCS rose to 15, with no further evidence of respiratory distress, and his subsequent dose of morphine sulphate was omitted. He, however, continued to complain of pain in his spine and legs.

What is the single best option with a view to managing his pain?

	Reduce dose of MST at 80mg BD
	Stop MST; convert to fentanyl
	Stop MST; convert to methadone
	Stop MST; convert to oxycodone
	Stop MST; convert to hydromorphone

Overall score: **0%**

1 -

□ Question 38 of 57



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Dashboard

Overall score: **0%**

1 -

□ Question 39 of 57



You are looking after a 35-year-old man who is in the oncology day unit receiving his second round of chemotherapy for a low grade non-Hodgkin's lymphoma. His lymphoma is confined to two lymph node groups in his anterior cervical chain and right inguinal region. In total there are 6 nodes with the largest being 4cm in size. He had no issues during his first round of chemotherapy apart from some nausea a week afterwards. He has no other medical problems and is on no other medications. His bloods pre-chemotherapy are as shown below:

Na ⁺	137 mmol/l
K ⁺	3.8 mmol/l
Urea	2.8 mmol/l
Creatinine	55 µmol/l
Corrected Calcium	2.39 µmol/l
Phosphate	1.05 µmol/l

What regimen would be most appropriate for prevention of tumour lysis syndrome in his case?

	Allopurinol (200mg BD)
	Fluids and allopurinol (200mg BD)
	Fluids and rasburicase (0.2mg/kg)
	Reduced dose chemotherapy
	Fluids, allopurinol (200mg BD) and rasburicase (0.2mg/kg)

Overall score: **0%**

1 -

□ Question 39 of 57



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	Reduced dose chemotherapy
	Fluids, allopurinol (200mg BD) and rasburicase (0.2mg/kg)

Overall score: **0%**

1 -

□ Question 40 of 57

□ □

An 89-year-old man with known metastatic prostate cancer is brought to the emergency department confused. He is unable to give further history but feels generally unwell. On examination his chest is clear, heart sounds normal and abdomen soft with no tenderness. His initial blood tests are shown below.

Na ⁺	134 mmol/l
K ⁺	4.7 mmol/l
Urea	7.8 mmol/l
Creatinine	104 µmol/l
Adjusted Ca ²⁺	3.5 mmol/l
Mg ²⁺	0.81 mmol/l

What is your first treatment?

	CT head
	IV bisphosphonate
	IV fluids
	Broad spectrum antibiotic
	IV hydrocortisone

Dashboard

Overall score: 0%

1 -

□ Question 40 of 57

□ □

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Dashboard

Overall score: **0%****1** -

Question 41 of 57



A 76-year-old woman with metastatic transitional cell carcinoma of the bladder is admitted to hospice with a 3-day history of hallucinations, confusion and pruritus. Her only other symptoms are intermittent vomiting and pelvic discomfort. She has a past medical history of hypertension and has recently completed a course of radiotherapy for bone metastases. She takes paracetamol, morphine sulphate, cyclizine, dexamethasone and a herbal flower remedy for anxiety.

On examination, she is cachectic and frail. The lungs are clear and heart sounds are normal. Pulse rate is 85 beats per minute and blood pressure 130/80mmHg. She is afebrile.

Neurological examination reveals myoclonus. She is mildly hypotonic and all reflexes are diminished. There is miosis on cranial nerve examination.

Blood tests show:

Hb	12.1 g/dl
Platelets	250 * 10 ⁹ /l
WBC	12 * 10 ⁹ /l

Na ⁺	135 mmol/l
K ⁺	4.3 mmol/l
Urea	5 mmol/l
Creatinine	80 µmol/l
Calcium (unadjusted)	2.1 mmol/l

Bilirubin	15 µmol/l
ALP	45 u/l
ALT	15 u/l

AST	20 u/l
Albumin	28 g/l

Urine dip: no abnormality

What is the most likely diagnosis?

	Hypercalcaemia
	Opioid toxicity
	Sepsis
	Corticosteroid psychosis
	Brain metastases

Dashboard

Overall score: 0%

1 -

Question 41 of 57



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	Sepsis
	Corticosteroid psychosis
	Brain metastases

Dashboard

Overall score: **0%**
1 -

□ Question 42 of 57



A 69-year-old male patient presents with worsening mouth soreness and painful swallowing, progressively getting worse over the last week. He started radical radiotherapy for a base of mouth squamous cell cancer three weeks ago. He also has a PEG in situ. He was recently seen by the dietician and is now having fluid and Ensure nutritional supplements via his PEG. He had been given soluble paracetamol by the specialist nurse, but this has failed to control his pain.

On examination, his oral cavity appears inflamed with multiple small ulcers posterior to his lower lip. There are no patches or plaques inside. You change the paracetamol to liquid co-codamol and give him a topical lidocaine gel at 2% strength. What is the most appropriate next step in management to control his symptoms?

	Benzydamine mouthwash
	Menthol mouthwash
	Chlorhexidine mouthwash
	Fluconazole
	Metronidazole

Dashboard

Overall score: 0%

1 -

□ Question 42 of 57



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	Menthol mouthwash
	Chlorhexidine mouthwash
	Fluconazole
	Metronidazole

Dashboard

Overall score: **0%****1** -

Question 43 of 57

□ □

A 51-year-old woman is reviewed in clinic. Two months ago she underwent an operation to remove a medullary thyroid cancer after presenting with diarrhoea and a neck lump. Genetic testing showed she has a mutation of the RET oncogene. The patient reports being well and there are no signs of local recurrence on examination.

What is the most appropriate test to monitor for recurrence?

	Thyroglobulin
	Thyroid transcription factor-1
	Chromogranin
	Calcitonin
	S100 protein

Dashboard

Overall score: 0%

1 -

□ Question 43 of 57

□ □

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	Thyroid transcription factor-1
	Chromogranin
	Calcitonin
	S100 protein

Dashboard

Overall score: **0%****1** -

□ Question 44 of 57



A 62-year-old man with metastatic small cell lung cancer is admitted with a shortness of breath, cough and purulent sputum.

His chest x-ray shows a right lower lobe pneumonia with partial collapse of the right lung. He has a bulky primary tumour at the right hilum and extensive hilar lymphadenopathy.

He is treated with IV antibiotics, fluids and oxygen. His symptoms improve over the next 5 days and his breathing is comfortable on 2 litres of oxygen via nasal cannulae. His pain is controlled on 20mg long-acting morphine sulphate twice daily. The decision is made to discharge him to a hospice for end-of-life care. However, due to the proximity of his lung tumour to major vessels, he is at risk of a major terminal bleed.

Which medication should the hospice be advised to give in the event of a major bleed?

	Haloperidol
	Midazolam
	Morphine
	Tranexamic acid
	Vitamin K

Dashboard

Overall score: 0%

1 -

□ Question 44 of 57



A 62-year-old man with metastatic small cell lung cancer is admitted with a shortness of breath, cough and purulent sputum.

His chest x-ray shows a right lower lobe pneumonia with partial collapse of the right lung. He has a bulky primary tumour at the right hilum and extensive hilar lymphadenopathy.

He is treated with IV antibiotics, fluids and oxygen. His symptoms improve over the next 5 days and his breathing is comfortable on 2 litres of oxygen via nasal cannulae. His pain is controlled on 20mg long-acting morphine sulphate twice daily. The decision is made to discharge him to a hospice for end-of-life care. However, due to the proximity of his lung tumour to major vessels, he is at risk of a major terminal bleed.

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Dashboard

Overall score: **0%**

1 -

□ Question 45 of 57

□ □

A 65-year-old man is referred to the oncology team after presenting to the emergency department. The patient described a three-week history of progressive thoracic back pain. The pain was localised to a point between the patient's shoulder blades, and was exacerbated by movement and coughing.

In addition, over the previous 6 hours, the patient reported that he had been struggling to stand up unassisted, and was having difficulty walking. The sudden change in his mobility had been the event that had prompted his attendance at hospital. When questioned directly, the patient described intermittent tingling sensations in his lower legs, but denied any loss of sensation. There had been no dysfunction of his bladder or bowels.

The patient had been diagnosed with prostate cancer five years previously. This had been treated with a radical prostatectomy and hormone therapy. The patient had moved area two years previously, and had subsequently been lost to urological follow-up. Despite his previous cancer treatment, the patient stated that he was very fit and active, playing golf three times a week and taking an active role in the care of his grandchildren.

Peripheral nerve examination of lower limbs: tone generally increased bilaterally; power generally slightly reduced (4+/5) bilaterally; normal coordination; no impairment of light touch or sharp touch sensation; knee and ankle jerks brisk bilaterally, plantar responses up going bilaterally.

Digital rectal examination: preserved peri-anal sensation and normal tone.

Bed-side bladder scan: 50 ml

MRI whole spine: metastatic invasion and collapse of T10 vertebral with spinal cord compression.

The patient was treated with analgesia and dexamethasone while definitive treatment was planned.

What is most appropriate first-line treatment of patient's spinal cord compression?

	Surgical tumour resection and spinal cord stabilisation with adjuvant radiotherapy
	Radiotherapy: single dose 8 Gy
	Chemotherapy: docetaxel

	Best supportive care
	Chemotherapy: cabazitaxel

Dashboard

Overall score: **0%**

1 -

□ Question 45 of 57



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	Chemotherapy: cabazitaxel

Dashboard

Overall score: **0%**
1 -

□ Question 46 of 57



A 72-year-old gentleman presents with a peeling and erythematous rash on both of his hands. He has noticed slight tingling in the same area but denies pain. He has a past medical history of colorectal cancer which was managed surgically with an anterior resection. He developed local recurrence of his cancer five months post-operatively. He is now on palliative chemotherapy with capecitabine and oxaliplatin every two weeks in order to control progression. His last treatment was one week ago. He has a history of type two diabetes mellitus, depression and has had a cholecystectomy when he was younger. On examination he appears frail and cachectic, but systemically well. His hands are shown to have patchy palmar erythema with mild desquamation. A similar rash is present on the soles of his feet.

Observations:

Saturations	97%
Respiratory rate	17/min
Blood pressure	132/73mmHg
Heart rate	71/min
Temperature	37.3°C

What is the most likely diagnosis?

	Erythromelalgia
	Palmoplantar psoriasis
	Palmar-plantar erythrodysesthesia
	Paraneoplastic syndrome
	Cellulitis

Overall score: **0%**

1 -

□ Question 46 of 57



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What is the most likely diagnosis?

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	Palmoplantar psoriasis
	Palmar-plantar erythrodysesthesia
	Paraneoplastic syndrome
	Cellulitis

Overall score: **0%**

1 -

□ Question 47 of 57



A 40-year-old man is seen in the Emergency Department with breathlessness.

He was diagnosed with non-Hodgkin lymphoma 6 months ago and has been receiving chemotherapy. He is awaiting an appointment in haematology outpatients to assess his response to chemotherapy.

He describes becoming more breathless over the last week and feeling that his arms and face are puffy. He has had no chest pain, cough or fevers.

On examination his oxygen saturations are 92% on air and his heart rate is 112 beats per minute. His chest is clear and he is unable to lay flat for his abdomen to be examined due to his breathlessness. His face appears flushed and he has oedema of the arms and hands. His neck veins appear engorged.

Chest x-ray shows a widened mediastinum with extensive lymphadenopathy.

A CT scan of the thorax confirms superior vena cava obstruction (SVCO). The scan is reviewed by the haematology team who explain to him that his lymphoma has progressed despite chemotherapy.

He is started on steroids and a proton pump inhibitor.

What is the next step in the management of this gentleman's SVCO?

	Chemotherapy
	Observation
	Radiotherapy
	Stent insertion
	Surgery

Overall score: **0%**

1 -

□ Question 47 of 57



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	Chemotherapy
	Observation
	Radiotherapy
	Stent insertion
	Surgery

Overall score: **0%**

1 -

□ Question 48 of 57



A 68-year-old man with metastatic prostate cancer is due to go for radiotherapy in an hour. The nurses tell you that he complained of pain during the transfer yesterday. His pain has been otherwise well controlled on a total of 60mg morphine daily. How is it best to manage his pain control for the transfer today?

	Nothing as it is only temporary pain
	An additional dose of 10mg morphine 30 minutes prior to his transfer
	An additional dose of 15mg morphine 1 hour prior to his transfer
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	An additional dose of 15mg morphine 30 minutes prior to his transfer

Dashboard

Overall score: 0%

1 -

□ Question 48 of 57

□ □

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Dashboard

Overall score: **0%**

1 -

Question 49 of 57

□ □

A 45-year-old male patient presents with an inaugural seizure. During surgery, it is found that has an aggressive glioma, and on further histological analysis the most aggressive form of glioma is diagnosed. Given the aggressive nature of this tumour, which of the following is the next step in the standard of care for this tumour?

	Chemotherapy
	Radiotherapy
	Chemo-radiotherapy
	No further therapy needed
	Biological agents

Dashboard

Overall score: 0%

1 -

Question 49 of 57

□ □

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Dashboard

Overall score: **0%**

1 -

□ Question 49 of 57

□ □

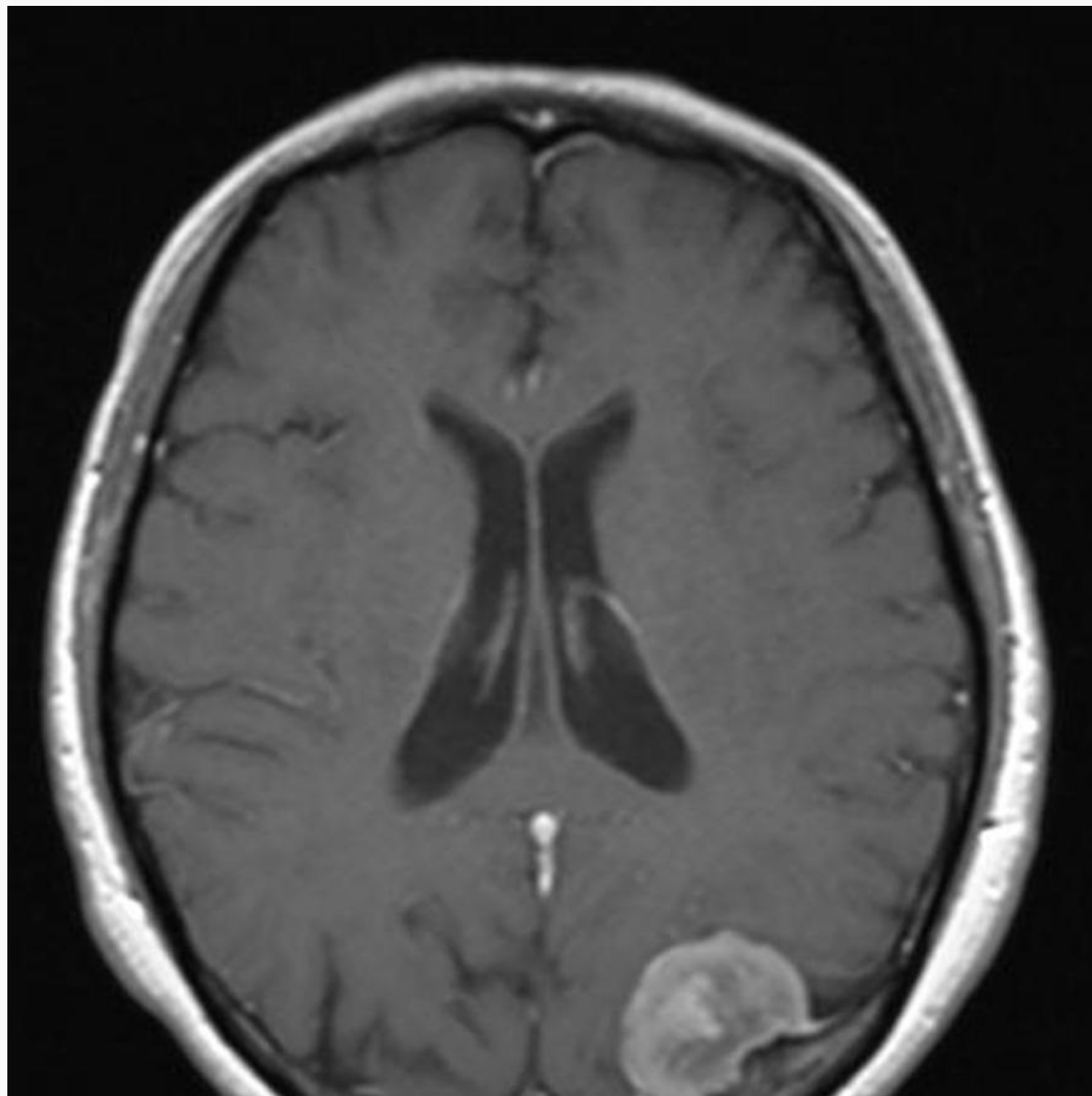
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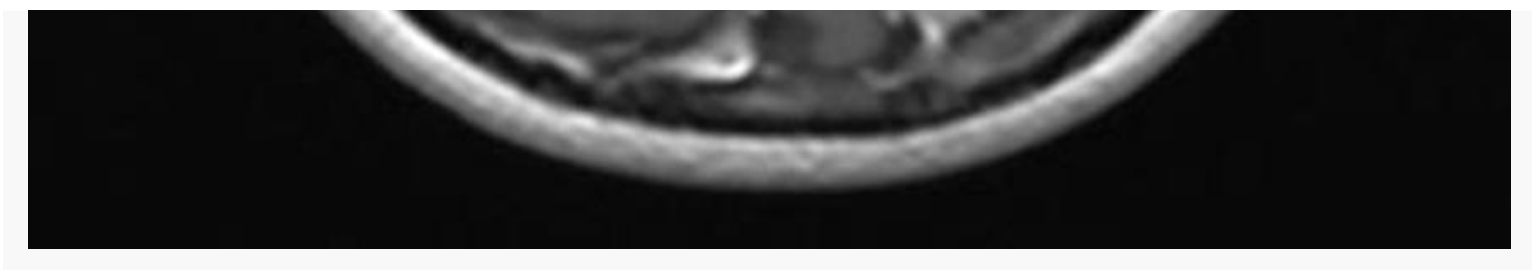
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Dashboard

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1 -





□ Question 49 of 57

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	Radiotherapy
	Chemo-radiotherapy
	No further therapy needed
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Dashboard

Overall score: 0%

1 -



□ Question 50 of 57



A 50-year-old man is diagnosed with high-grade non-Hodgkin's lymphoma and starts his regimen of R-CHOP chemotherapy. Two days after his chemotherapy he complains of feeling increasingly weak, lethargic and generally unwell. He has developed persistent vomiting and is unable to tolerate oral fluids.

He has a history of recurrent gout but has been unable to tolerate allopurinol.

On examination, he looks unwell and pale. He seemed short of breath with a respiratory rate of 28 per minute. His temperature is 36.5°C, heart rate 110 bpm, blood pressure 100/60 mmHg.

His heart sounds were normal. His JVP was raised by 4cm lying at 45 degrees in the bed. Examination of the chest revealed fine bibasal inspiratory crepitations. Pitting oedema was present to mid-shins bilaterally.

Abdominal examination was unremarkable.

On neurological examination, there was normal tone and sensation to all limbs. General weakness was noted.

The house officer has taken bloods:

Na+	137 mmol/L
K+	6.2 mmol/L
Urea	15 mmol/L (previously 8)
Creatinine	240 µmol/L (previously 100)
Hb	100 g/L
WBC	$10.0 \times 10^9/L$
Corrected Calcium	1.95 mmol/L
Phosphate	2.3 mmol/L
Uric acid	640 mmol/L
LFTs	Normal

Chest x-ray shows congested lung fields.

ECG demonstrates tall T waves.

In view of the diagnosis which of the following is most likely to treat the hyperuricaemia?

	IV calcium gluconate, insulin and dextrose infusion
	Allopurinol
	Rasburicase
	IV fluids
	IV electrolyte replacement

Dashboard

Overall score: 0%

1 -

□ Question 50 of 57



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Dashboard

Overall score: **0%**

1 -

Question 51 of 57



A 56-year-old man with metastatic small cell lung carcinoma is admitted to hospital with vomiting, ankle swelling and pruritus. He recently completed a course of palliative chemotherapy. He has a background of chronic obstructive pulmonary disease and hypertension and takes morphine sulphate (MST) for pain relief.

On examination, he is cachectic with peripheral oedema and skin excoriations. Heart rate is 96 beats per minute and blood pressure is 140/85 mmHg.

Tests show:

Hb	134 g/l
Platelets	$185 \times 10^9/l$
WBC	$5.5 \times 10^9/l$

Na ⁺	146 mmol/l
K ⁺	5.4 mmol/l
Urea	23 mmol/l
Creatinine	420 μ mol/l

Urine dip:	Blood +
Urine osmolality	350 mOsm/L
Urinary sodium	45 mEqL
Microscopy:	red cells; casts.

What is the most appropriate pain relief for this patient?

	Fentanyl patch
--	----------------

	Diamorphine
	Oxycodone
	Pregabalin
	Tramadol

Dashboard

Overall score: **0%**

1 -

Question 51 of 57



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Urinary sodium	45 mEqL
Microscopy:	red cells; casts.

What is the most appropriate pain relief for this patient?

Fentanyl patch

	Diamorphine
	Oxycodone
	Pregabalin
	Tramadol

Dashboard

Overall score: **0%**
1 -

□ Question 52 of 57



A 68-year-old gentleman was admitted to the medical admissions unit with increasing drowsiness. He had been diagnosed with primary small cell carcinoma of the lung six months ago and had declined curative chemotherapy. At the time of diagnosis there was no evidence of metastasis, and his past medical history comprised of chronic obstructive pulmonary disease, ischaemic heart disease, hypertension, hypercholesterolaemia and depression.

His wife had taken him to the Emergency Department having noted that he had been increasingly drowsy over the last few hours, as well as developing new onset confusion. He had otherwise been relatively well prior to the admission. He had consulted his GP about new onset generalised aches and pains within the last four weeks for which his GP had commenced Oramorph solution PRN. Since then he had developed abdominal pain which the GP had diagnosed as secondary to opiate-induced constipation and he was accordingly prescribed lactulose 15ml BD with partial relief of his symptoms. There had been no evidence of weakness or numbness and no evidence of speech impairment; as far as his wife was aware he had taken the prescribed dose of oramorph. His drug history comprised of oramorph solution 10mg BD, paracetamol 1g QDS, dihydrocodeine 60mg QDS, lactulose 15ml BD, aspirin 75mg OD, atorvastatin 20mg ON, bisoprolol 2.5mg OD, Ramipril 2.5mg OD and furosemide 40mg OD.

Examination revealed a drowsy gentleman with a GCS of 12 (E 3 M5 V4). His blood pressure was 102/68, heart rate 58bpm, respiratory rate 10/min, oxygen saturations of 95% on air and temperature 36.6°C. Examination of his cardiovascular and respiratory systems were unremarkable. Examination of his central nervous system revealed the presence of normal sized pupils; he was not compliant with formal neurological examination but no other focal neurological signs were found. There was no evidence of neck stiffness and Kernig's sign was negative. He was not cooperative with an abbreviated mental state examination.

Which investigation is most likely to be diagnostic of the underlying cause?

	Urgent CT head scan
	Urgent serum liver function and calcium profile
	Urgent isotope bone scan
	Urgent septic screen
	Urgent PET scan

Dashboard

Overall score: **0%**

1 -

Question 52 of 57



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	Urgent septic screen
	Urgent PET scan

Dashboard

Overall score: **0%**

1 -

Question 53 of 57



A 58 year-old man is referred to the clinic with chronic diarrhoea and episodes of facial flushing. A computed tomography scan of her chest and abdomen reveal she has a neuroendocrine carcinoma of the appendix, causing carcinoid syndrome.

She refuses treatment and presents six months later having been referred by a neurologist as having early onset dementia and a rapidly evolving photosensitive rash on her trunk and upper arms.

Which of the following is the most likely diagnosis?

	Systemic lupus erythematosus
	Herpes Zoster infection
	Pellagra
	Wernicke-Korsakoff syndrome
	Porphyria

Dashboard

Overall score: 0%

1 -

Question 53 of 57



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	Pellagra
	Wernicke-Korsakoff syndrome
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Dashboard

Overall score: 0%
1 -

□ Question 54 of 57



A 50-year-old woman presents with a painful burning rash one week after starting chemotherapy. She describes a tingling sensation that started three days previously, which then progressed to swelling and redness of both her hands. She now finds that is impacting on what she able to do at home. Over the last day, she has noticed a blister as well. She has otherwise been suffering from fatigue and nausea since starting chemotherapy. She has a past medical history of left breast cancer managed with wide local excision and axillary node clearance following adjuvant radiotherapy and chemotherapy with docetaxel, as well as endocrine therapy. What is the most appropriate management?

	Topical hydrocortisone
	Prednisolone
	Flucloxacillin
	Stop endocrine treatment
	Dose reduction of docetaxel

Dashboard

Overall score: 0%

1 -

□ Question 54 of 57



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	Prednisolone
	Flucloxacillin
	Stop endocrine treatment
	Dose reduction of docetaxel

Dashboard

Overall score: **0%****1** -

Question 55 of 57

□ □

A 72-year-old woman presents to the emergency department with a painful and swollen leg. This has developed over two days, and she otherwise feels well in herself. She was recently away on holiday to Spain and returned four weeks ago. She is able to mobilise independently and has had no reduced periods of mobility. She has a background breast cancer diagnosed four years ago, which unfortunately relapsed and spread into her liver. She is now on hormonal treatment only.

On examination, her left leg is swollen and red, and the calf diameter is significantly larger on the left side. A doppler ultrasound scan demonstrates a left-sided deep vein thrombus. What is the most appropriate anticoagulation strategy?

	Three months of low molecular weight heparin
	Six months of low molecular weight heparin
	Six months of a new oral anticoagulant (NOAC)
	Three months of warfarin
	Six months of warfarin

Dashboard

Overall score: 0%

1 -

Question 55 of 57

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Dashboard

Overall score: **0%**

1 -

□ Question 56 of 57



A 69-year-old gentleman presented for routine follow-up in the oncology clinic. He has metastatic poorly differentiated adenocarcinoma of unknown primary. He commenced palliative chemotherapy with oxaliplatin and fluorouracil two months ago. The most recent CT scan demonstrated stable disease.

Ten days ago he was admitted to the local emergency department with fever and diagnosed with neutropenic sepsis, of which the cause was not clear. He was admitted for IV Tazocin for five days then discharged with co-amoxiclav and filgrastim (G-CSF). He currently feels well. On examination there are no abnormalities.

Observations:

Saturations	95%
Respiratory rate	14/min
Blood pressure	152/83mmHg
Heart rate	69/min
Temperature	37.3°C

Blood tests:

Date	24/10/2016	10/10/2016
Hb	124g/l	135g/l
Platelets	285* 10 ⁹ /l	322* 10 ⁹ /l
WBC	23.6* 10 ⁹ /l	0.2* 10 ⁹ /l

What is the most appropriate course of action?

	Restart oral co-amoxiclav
	Arrange admission for IV tazocin
	Arrange admission for IV meropenem

	Start prednisolone
	Stop filgrastim (G-CSF)

Dashboard

Overall score: **0%**

1 -

Question 56 of 57



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Dashboard

Overall score: **0%**
1 -

□ Question 57 of 57



A 16 year old male is referred to your clinic after reporting feeling increasingly tired at school over the past 2 months. His parents are similarly concerned that their son seems to be relying on large volumes of lucozade to keep himself alert during this stressful period of secondary school examinations. He reports no headaches. The patient was born following a normal pregnancy and development until he was 12 years old, when he underwent chemotherapy and radiotherapy treatment for an optic chiasm glioma, forcing him to miss one academic year of school. On completion of his treatment, he returned to school and has been achieving good grades. There is no other past medical or family history.

On examination, the patient is short for his age (at 2nd centile) and you note an absence of facial hair or other secondary sexual characteristics. He is thin with a BMI of 13.7 kg/m². Chest, cardiovascular and abdominal examinations are unremarkable. There are no skin lesions. Neurological examination including cranial nerve is unremarkable. His initial blood tests are as follows:

Hb	14.2 g/dl
MCV	89 fl
Platelets	410 * 10 ⁹ /l
WBC	7.4 * 10 ⁹ /l
Na ⁺	139 mmol/l
K ⁺	4.6 mmol/l
Urea	5.1 mmol/l
Creatinine	44µmol/l
FSH	low
ACTH	low
TSH	0.13 mu/l

What is the likely diagnosis?

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	Cranial radiation injury
	Glioma recurrence in optic chiasm
	Klinefelter's syndrome
	Turner's syndrome
	Haemochromatosis

Dashboard

Overall score: **0%**

1 -

□ Question 57 of 57



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MCV	89 fl
Platelets	410 * 10 ⁹ /l
WBC	7.4 * 10 ⁹ /l
Na ⁺	139 mmol/l
K ⁺	4.6 mmol/l
Urea	5.1 mmol/l
Creatinine	44µmol/l
FSH	low
ACTH	low
TSH	0.13 mu/l

What is the likely diagnosis?

--	--

	Cranial radiation injury
	Glioma recurrence in optic chiasm
	Klinefelter's syndrome
	Turner's syndrome
	Haemochromatosis

Dashboard

Overall score: **0%**
1 -

□ Question 57 of 57



A 16 year old male is referred to your clinic after reporting feeling increasingly tired at school over the past 2 months. His parents are similarly concerned that their son seems to be relying on large volumes of Lucozade to keep himself alert during this stressful period of secondary school examinations. He reports no headaches. The patient was born following a normal pregnancy and development until he was 12 years old, when he underwent chemotherapy and radiotherapy treatment for an optic chiasm glioma, forcing him to miss one academic year of school. On completion of his treatment, he returned to school and has been achieving good grades. There is no other past medical or family history.

On examination, the patient is short for his age (at 2nd centile) and you note an absence of facial hair or other secondary sexual characteristics. He is thin with a BMI of 13.7 kg/m². Chest, cardiovascular and abdominal examinations are unremarkable. There are no skin lesions. Neurological examination including cranial nerve is unremarkable. His initial blood tests are as follows:

Hb	14.2 g/dl
MCV	89 fl
Platelets	410 * 10 ⁹ /l
WBC	7.4 * 10 ⁹ /l
Na ⁺	139 mmol/l
K ⁺	4.6 mmol/l
Urea	5.1 mmol/l
Creatinine	44 μmol/l
FSH	low
ACTH	low
TSH	0.13 mu/l

What is the likely diagnosis?

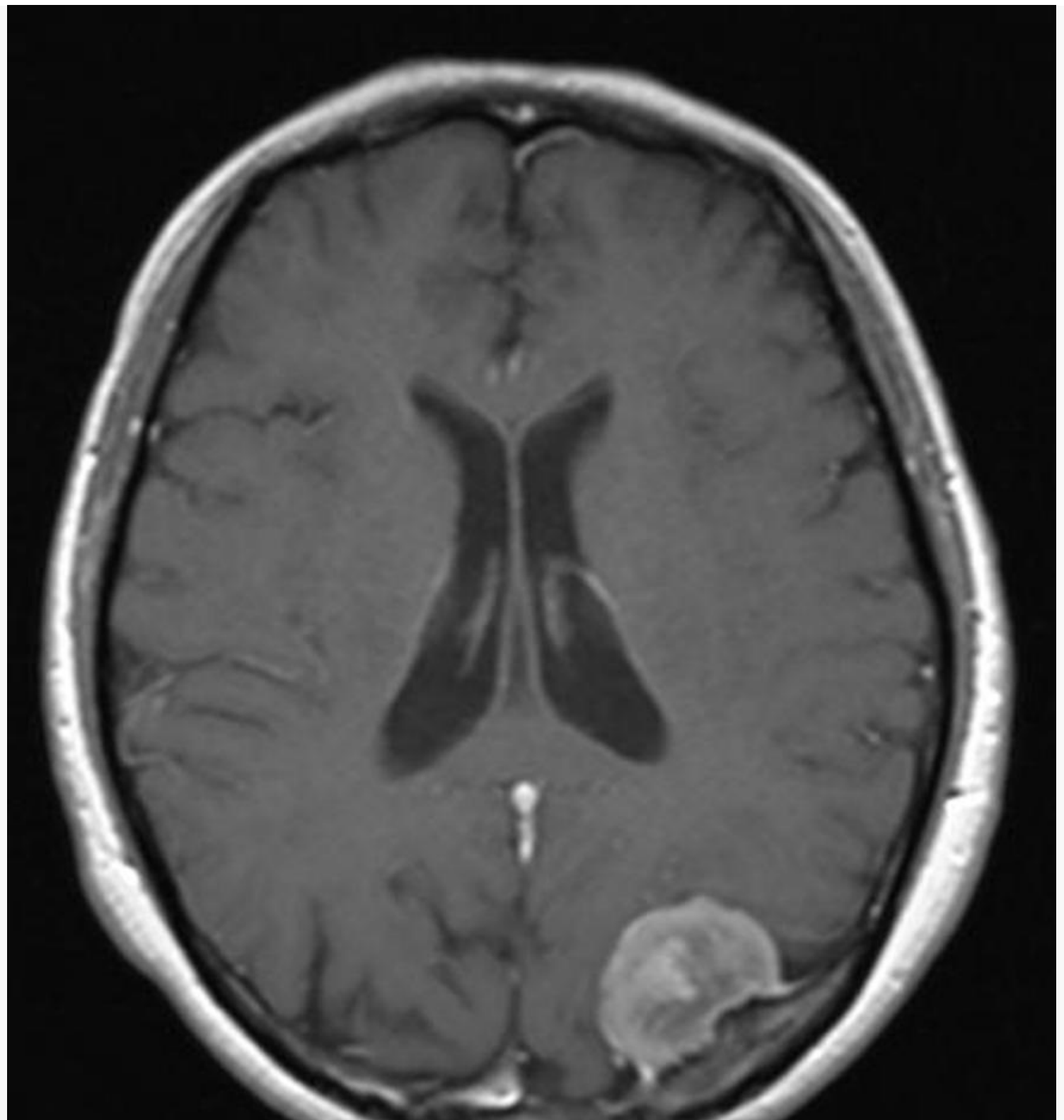
Cranial radiation injury

	Glioma recurrence in optic chiasm
	Klinefelter's syndrome
	Turner's syndrome
	Haemochromatosis

Dashboard

Overall score: **0%**

1 -





□ Question 57 of 57



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	Glioma recurrence in optic chiasm

	Klinefelter's syndrome
	Turner's syndrome
	Haemochromatosis

Dashboard

Overall score: **0%**

1 -



□ Question 1 of 144

□ □

A 53-year-old patient with previous hyperparathyroidism and recurrent urinary tract infections presents with an episode of haematuria and aching right loin pain radiating to her groin.

On examination there is some mild right flank pain, but no palpable masses or organomegaly. Urine dip shows blood 3+, protein 1+ and leucocytes 2+.

A CT scan of the abdomen demonstrates a staghorn calculus.

Together with increased urinary ammonia, what condition is required for the formation of struvite stones?

	Diet rich in dairy products
	Bacteria that do not generate urease
	Urinary pH >7.2
	Hypocalcaemia
	Female sex

Dashboard

Overall score: 0%

1 -

Question 1 of 144

□ □

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Dashboard

Overall score: **0%**

1 -

□ Question 2 of 144



A 28-year-old man with a family history of autosomal dominant polycystic kidney disease attended renal clinic for assessment. The patient's mother and his two older siblings have all previously been diagnosed with the disease. The patient admitted that he had been reluctant previously to be assessed for ADPKD while he had been asymptomatic but that he was now keen to undergo investigation and treatment. The patient denied any previous medical history and did not take any regular medications.

Clinical examination of the abdomen was unremarkable with a euvoelaemic fluid status. Blood pressure measured in the clinic was 132 / 82 mmHg.

Please see below for results of investigations arranged following clinic assessment.

Urea	6.7 mmol / L
Creatinine	85 micromol / L
Estimated globular filtration rate	> 90 mL / min / 1.73 m ²
Sodium	140 mmol / L
Potassium	3.9 mmol / L

Renal tract ultrasound: left kidney 10 cm in length with 3 cysts; right kidney 9.7 cm in length with 2 cysts; no renal or ureteric calculi; no hydronephrosis or hydroureter.

Urine dipstick: proteinuria ++; otherwise unremarkable

What is the appropriate therapeutic management of the patient at the present time?

	Ramipril with blood pressure target < 140 / 90 mmHg
	Hydralazine with blood pressure target < 120 / 70 mmHg
	Ramipril with blood pressure target < 110 / 75 mmHg

	Tolvaptan
	Hydralazine with blood pressure target < 130 / 80 mmHg

Dashboard

Overall score: **0%**

1 -

□ Question 2 of 144

□ □

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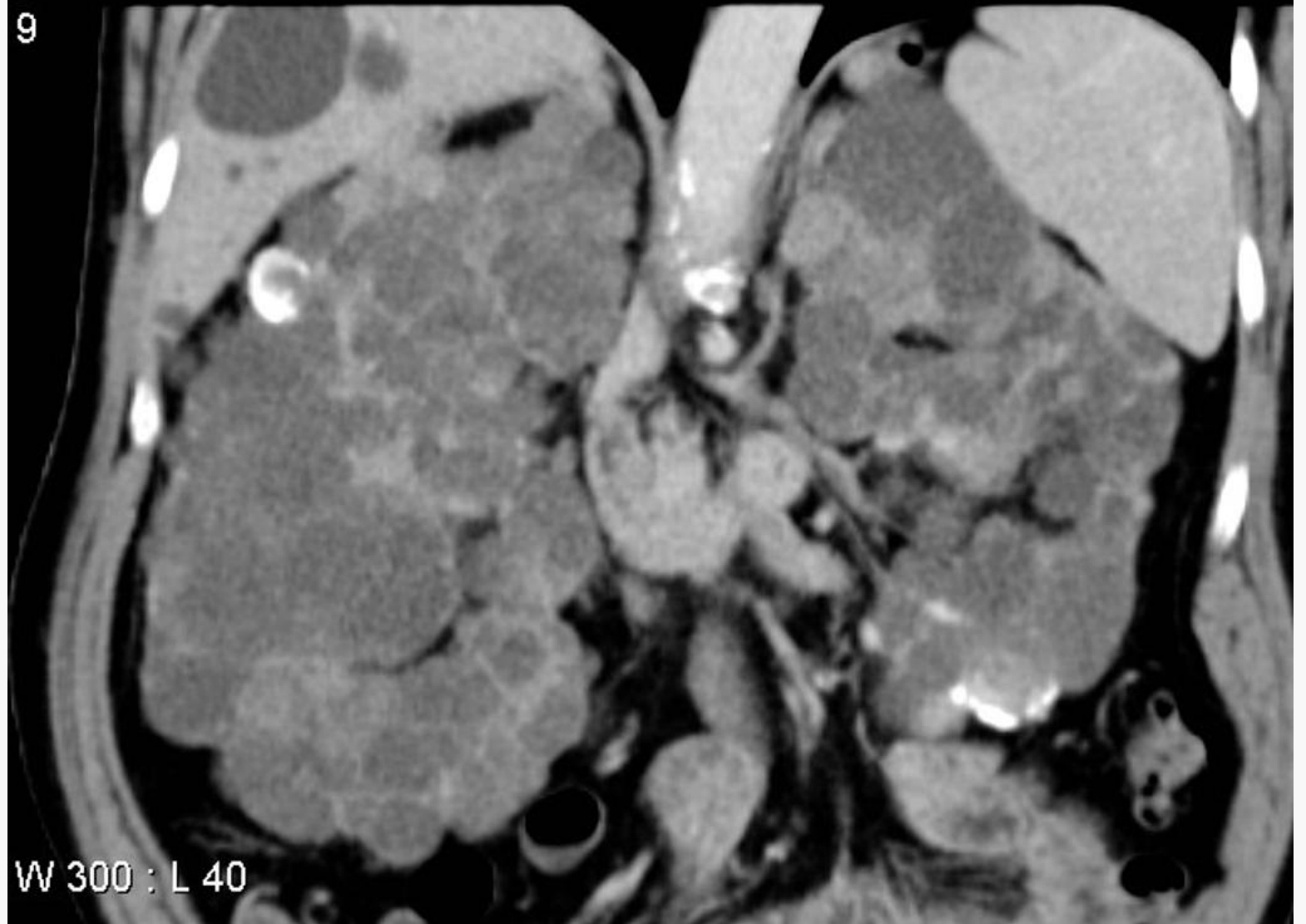
	Ramipril with blood pressure target < 140 / 90 mmHg
	Hydralazine with blood pressure target < 120 / 70 mmHg
	Ramipril with blood pressure target < 110 / 75 mmHg
	Tolvaptan
	Hydralazine with blood pressure target < 130 / 80 mmHg

Dashboard

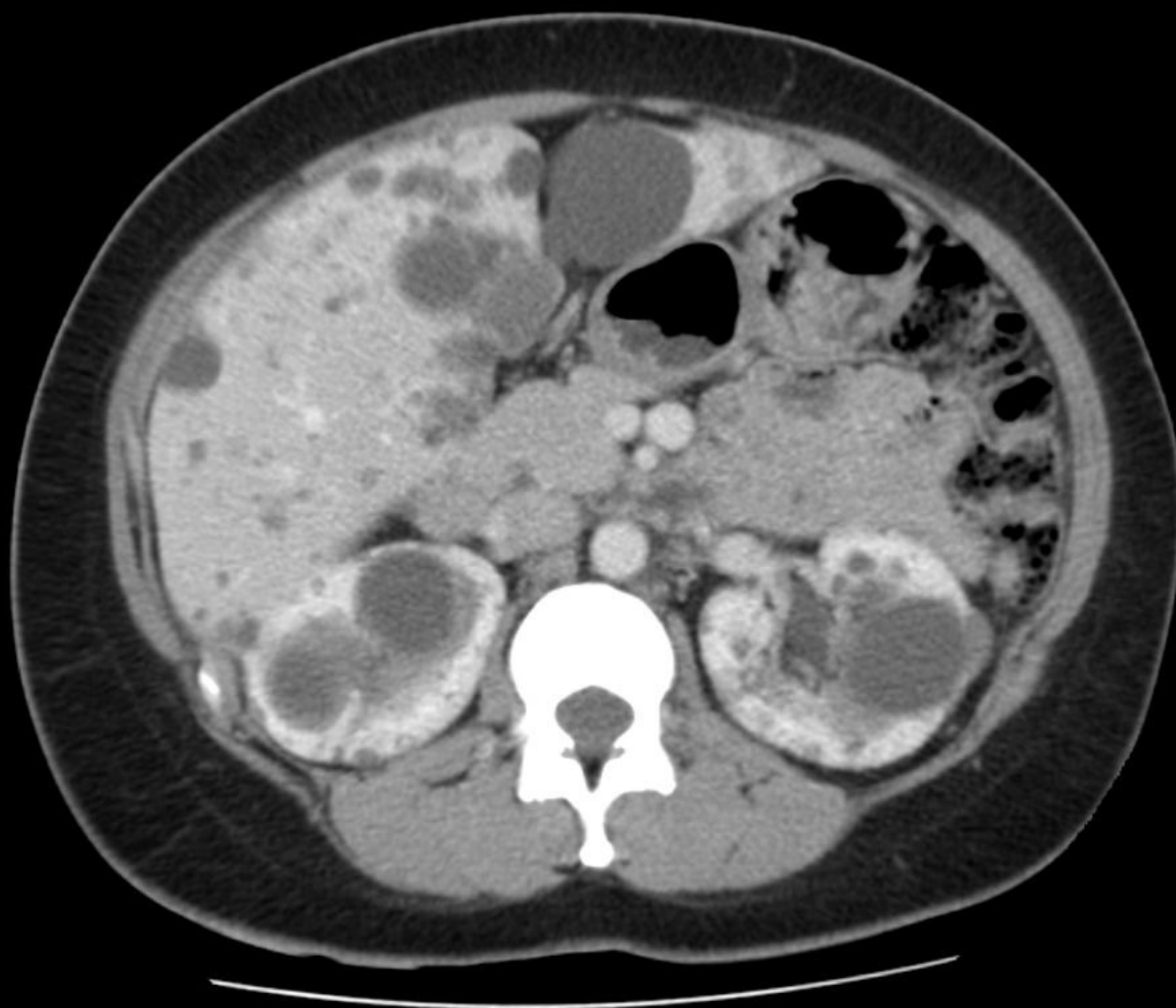
Overall score: **0%****1** -



9



W 300 : L 40



□ Question 3 of 144



A 53-year-old male presents acutely as a primary percutaneous coronary intervention (PPCI) call after sudden onset chest pain of onset 3 hours ago, associated with nausea, vomiting and profuse sweating. His ECG in the ambulance demonstrates ST elevation noted on V2 V5. His past medical history includes include hypertension, type 2 diabetes mellitus, chronic kidney disease (creatinine baseline = 170 $\mu\text{mol/l}$ at the renal clinic 2 months ago). He is taken straight to the cardiac catheter laboratory, where he undergoes angioplasty and a single drug eluting stent to his left anterior descending artery. On examination, he is pain-free, warm peripherally without respiratory distress. Capillary refill time is less than 2s and jugular venous pulse at 3 cm above the angle of Louis. His heart sounds and chest are unremarkable. A post-procedure transthoracic echocardiogram demonstrates moderate left ventricular impairment with no valve abnormalities.

At 24 hours after admission, his blood tests are repeated and are as follows:

WCC	92 g/l
Hb	13.5 * $10^9/\text{l}$
Plt	198* $10^9/\text{l}$
Na	138 mmol/l
K	4.2 mmol/l
Urea	12.9 mmol/l
Creat	254 mmol/l
Trop	0.87 (normal < 0.03)

What is the most appropriate next management step in addition to optimisation of hydration status?

	Monitor with daily U+Es
	Haemofiltration
	Organise urgent outpatient haemodialysis

	Intravenous n-acetylcysteine
	Intravenous mannitol

Dashboard

Overall score: **0%**

1 -

□ Question 3 of 144



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	Organise urgent outpatient haemodialysis

	Intravenous n-acetylcysteine
	Intravenous mannitol

Dashboard

Overall score: **0%**
1 -

□ Question 4 of 144



You are the medical doctor in an acute medical clinic. A 32-year old gentleman who is an intravenous drug user of heroin has been referred by his GP for renal impairment. He feels well in himself and denies any urinary symptoms. His observations are: temperature 36.8°C, pulse 98/min, blood pressure 148/68 mmHg, respiratory rate 14/min, sats 95% on room air.

His urine dipstick has 3+ proteinuria, nil else. Recent hepatitis and HIV tests were -ve. His blood tests are as below:

Na ⁺	138 mmol/l
K ⁺	4.6 mmol/l
Bicarbonate	22 mmol/l
Urea	9.8 mmol/l
Creatinine	152 µmol/l
eGFR	58 ml/min (baseline 80)

What is the most likely cause for his renal impairment?

	Septic emboli
	Renal vein thrombosis
	Focal segmental glomerulosclerosis
	Membranous nephropathy
	Membranoproliferative glomerulonephritis

Overall score: **0%**

1 -

Question 4 of 144



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Overall score: **0%**

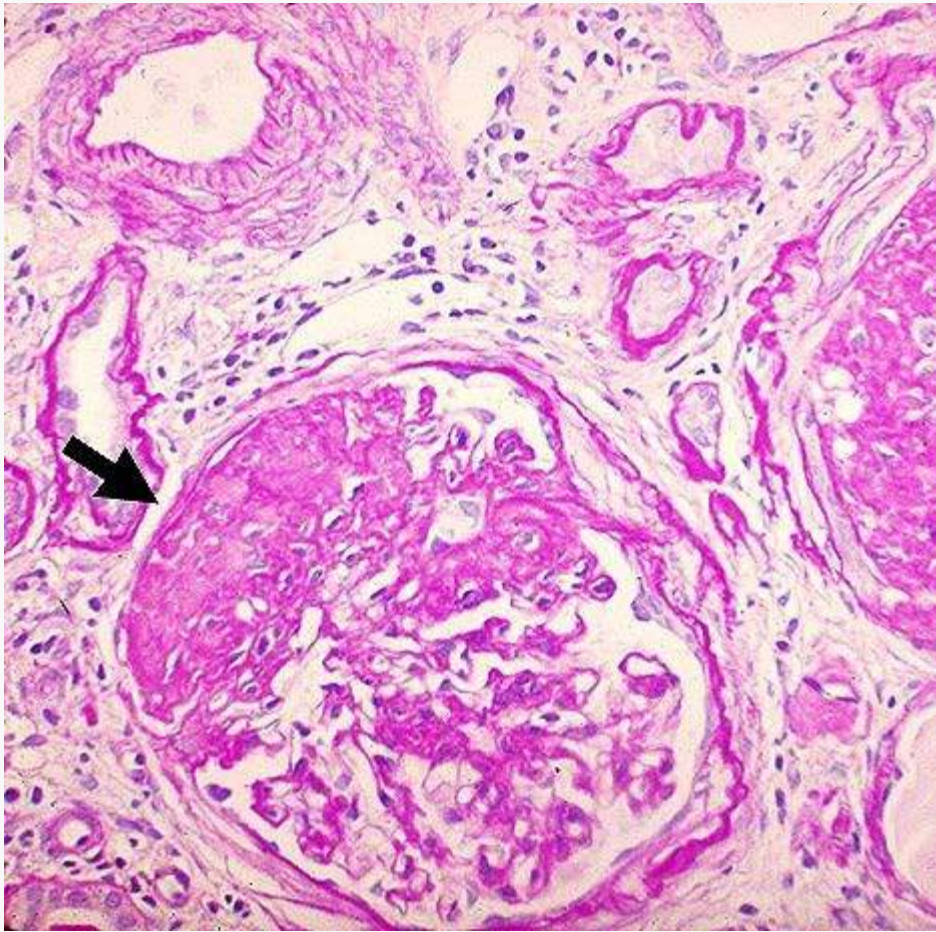
1 -

Question 4 of 144

You are the medical doctor in an acute medical ward. A 55-year-old male with a long history of heroin use has been referred by his GP for renal impairment. His observations are: temperature 36.8°C, pulse 96 bpm, respiratory rate 18 bpm, oxygen saturation 98% on room air.

His urine dipstick has 3+ proteinuria, nil else. Renal function is as follows:

Na ⁺	138 mmol/l
K ⁺	4.6 mmol/l
Bicarbonate	22 mmol/l
Urea	9.8 mmol/l
Creatinine	152 µmol/l
eGFR	58 ml/min (baseline 80)



What is the most likely cause for his renal impairment?

	Septic emboli
	Renal vein thrombosis
	Focal segmental glomerulosclerosis
	Membranous nephropathy
	Membranoproliferative glomerulonephritis

Overall score: **0%**

1 -

□ Question 4 of 144

□ □

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His urine dipstick has 3+ proteinuria, nil else. Recent hepatitis and HIV tests were -ve. His blood tests are as below:

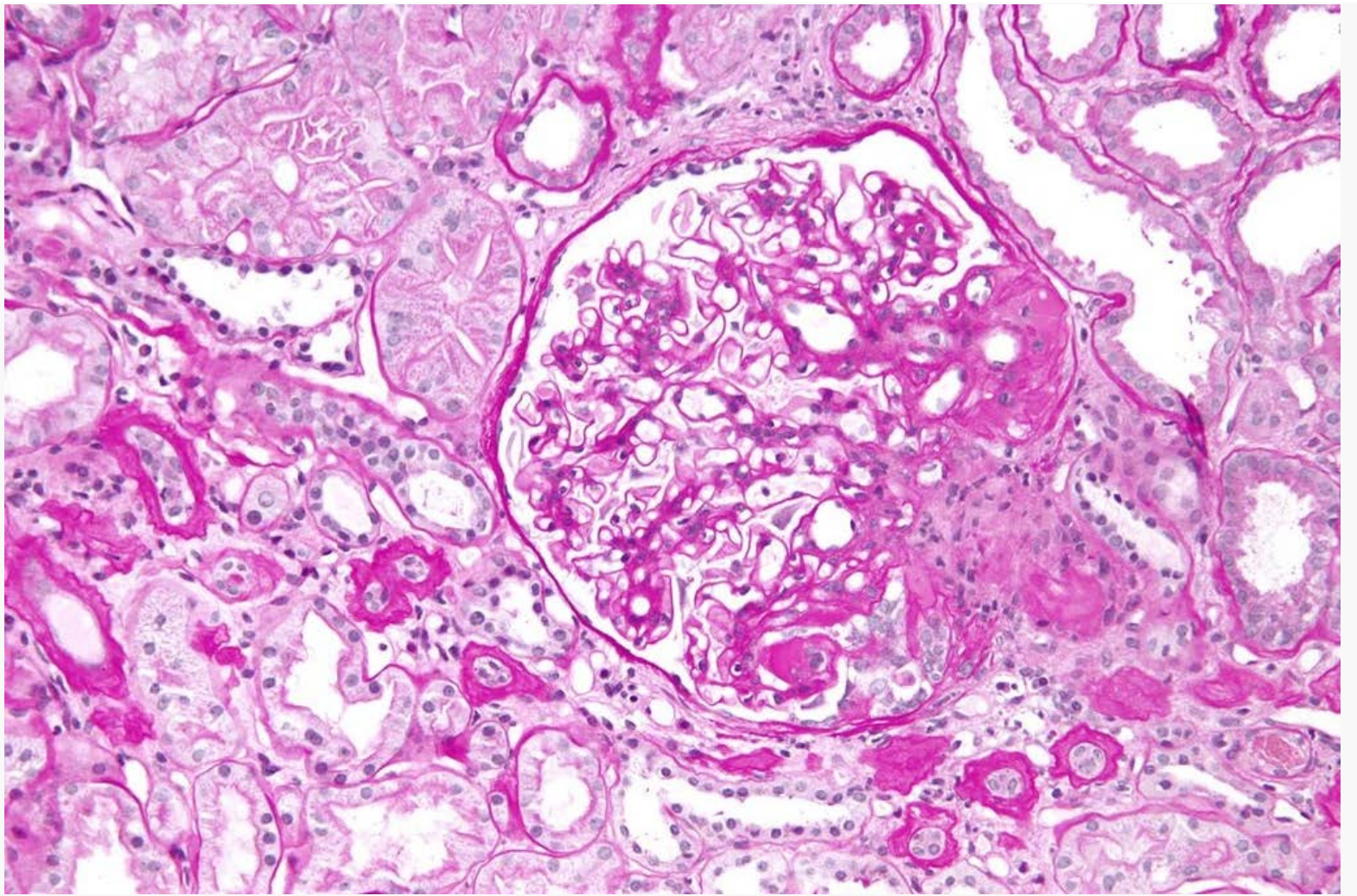
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	Septic emboli
	Renal vein thrombosis
	Focal segmental glomerulosclerosis
	Membranous nephropathy
	Membranoproliferative glomerulonephritis

Overall score: **0%**

1 -



Question 5 of 144

□ □

An 82-year-old female presents to clinic with her daughter complaining of a four month history of urinary incontinence. She explains that she has not previously had problems with continence. Her only past medical history include hypertension and angina. Now, she is incontinent of urine only when she laughs or coughs. At times, she reports sudden urges to urinate at all times during the day, resulting in a leak when she is unable to reach the toilet in time. This is significantly impacted on her sleep as well as it is increasingly frequent at night. The patient has reduced her caffeine intake already and has commenced 'bladder training' recommended by her GP. What additional management would you commence?

	Pelvic floor exercises only
	Pelvic floor exercises and tolterodine
	Pelvic floor exercises and duloxetine
	Pelvic floor exercises and desmopressin
	Long term urinary catheter

Dashboard

Overall score: 0%

1 -

Question 5 of 144

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	Pelvic floor exercises and duloxetine
	Pelvic floor exercises and desmopressin
	Long term urinary catheter

Dashboard

Overall score: **0%**

1 -

□ Question 6 of 144



A 45 year old woman attends her General Practitioner to report a three month history polyuria. Having previously not been troubled by urinary symptoms, the patient now needs to pass urine up to every 60 to 90 minutes during the day and is being woken from sleep on at least two occasions per night. There is no history of increased urinary urgency or dysuria. The patient had not changed her fluid intake in recent weeks and consumes minimal caffeine and alcohol. Otherwise the patient had been fairly well in herself although had noticed a tendency to loose stools and 4 Kg weight loss over recent weeks.

The patient was normally fit and well and worked as an accountant. Past medical history included only an appendicectomy as a child and there were no previous pregnancies. The patient reported that her twin sister had been diagnosed with coeliac disease 5 years previously. There were no regular medications or allergies.

On examination the patient was slim and appeared slightly anxious. Cardiovascular, respiratory and ocular examination was normal. There were no skin rashes.

Initial investigations requested by the General Practitioner are listed below.

Haemoglobin	12.4 g / dL
White cell count	$6.5 \times 10^9/l$
Platelets	$329 \times 10^9/l$
Urea	3.5 mmol / L
Creatinine	75 micromol / L
Sodium	142 mmol / L
Potassium	3.7 mmol / L
Calcium (adjusted)	2.4 mmol / L
Haemoglobin A1C	5.3 % (reference 4-6)
Serum glucose (random)	4.7 mmol / L

Urine dipstick: negative for nitrites; negative for leucocytes; negative for glucose; negative for ketones; negative for

protein; negative beta-HCG

Urine microscopy, culture and sensitivities: white cell count < 10 / mm³; no growth

What is most appropriate next test to diagnose cause of polyuria?

	Paired serum and urine osmolality
	Paired serum and urine osmolality after desmopressin
	Urodynamic studies
	Thyroid function tests
	Serum tissue transglutaminase IgA

Dashboard

Overall score: 0%

1 -

□ Question 6 of 144



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Dashboard

Overall score: **0%**

1 -

□ Question 7 of 144



A 52-year-old female with a history of systemic lupus erythematosus presents to the emergency department with 4 days history of high-grade fever and productive cough. She recently travelled to France with her husband and has been feeling unwell ever since she got back home.

Her medication history included prednisolone 10mg daily, and hydroxychloroquine 200mg twice daily which she has been taking for the last 12 years. She is additionally on once-yearly zoledronic acid and occasional naproxen.

On examination, she has a temperature of 38.5°C and a pulse of 130 bpm which is regular and low volume. Her blood pressure is 80/50 mmHg and she has cold peripheries. She has a confluent rash on her cheeks with nasolabial sparing. Examination of her respiratory system reveals a patch of bronchial breathing in the left middle of the chest. The remaining physical examination is essentially unremarkable.

Laboratory investigations reveal:

Hb	110 g/dl
MCV	85 fl
MCH	24 pg (27 - 32 pg)
WBC	$17 \times 10^9/l$
Plt	$450 \times 10^9/l$
Urea	14.9 mmol/l
Creatinine	298 μ mol/l
Na ⁺	128 mmol/l
K ⁺	3.9 mmol/l
Albumin	32g/l

Urine dipstick shows protein 1+

Urinary electrolytes reveal:

Urinary specific gravity	1.031 (1.010 - 1.020)
Urinary osmolality (mOsm/kg)	675 (350 - 500)
Urinary sodium (mmol)	8 (20 - 40)
Fe _{Na}	0.2% (1%)

Which of the following is the most appropriate initial management option?

	IV hydration with 0.9% saline
	Increase prednisolone to 1mg/kg/day
	Start mycophenolate mofetil
	IV hydration with 3% saline
	Commence inotropic support with dobutamine

Dashboard

Overall score: 0%

1 -

□ Question 7 of 144



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Dashboard

Overall score: **0%**
1 -

□ Question 8 of 144



A 17-year-old male presents with bilateral lower limb and periorbital swelling of gradual onset about 3 days ago. He reports no pain or tenderness elsewhere. He has no past medical, drug allergies and does not take any medications on a regular basis. He has been smoking cigarettes and marijuana for 2 years 'occasionally' but refuses to acknowledge an estimate.

About 5 weeks ago, he had a few days of a 'cough and cold', during which he developed swollen glands in his neck, a sore throat and a temperature of 37.6°C. He sought medical attention from his GP, who prescribed antibiotics to little avail. The illness spontaneously resolved after 3 days.

A urine dip reveals 4+ protein, no blood, leucocytes or nitrites. A 24-hour urine collection demonstrated protein of 3.8g.

His selected blood tests demonstrate:

Urea	6.5 mmol/l
Creatinine	90 µmol/l
Albumin	21 g/l
Complement	normal
HIV p24 antigen	negative

His renal biopsy demonstrates podocyte fusion.

What is the cause of his presentation?

	Mesangioproliferative glomerulonephropathy
	Minimal change disease
	HIV seroconversion
	Diffuse proliferative glomerulonephritis

	Secondary focal segmental glomerulosclerosis
--	--

Dashboard

Overall score: **0%**

1 -

Question 8 of 144



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Dashboard

Overall score: **0%**
1 -

□ Question 9 of 144



A 38-year-old known ulcerative colitis (UC) patient presents to the emergency department with excruciating sudden onset left sided loin to groin pain. The patient has no other medical problems. He had a panproctocolectomy and ileostomy 5 years ago after he suffered a colitis flare which did not respond to medical therapy. On examination he is in obvious pain and his urine dip shows 3+ RBCs. He is given diclofenac and 5mg IV morphine and his pain settles. His observations after he is pain-free are normal.

His blood tests are:

Hb	145 g/l
Platelets	455 * 10 ⁹ /l
WBC	11.9 * 10 ⁹ /l

Na ⁺	136 mmol/l
K ⁺	4.5 mmol/l
Urea	8.8 mmol/l
Creatinine	99 µmol/l
Calcium (adj)	2.48 mmol/L
CRP	<10 mg/L

He undergoes a KUB X-ray which shows a left sided stone in the ureter. What is the likely type of renal stone?

	Urate
	Magnesium pyrophosphate
	Xanthine

	Calcium oxalate
	Cystine

Dashboard

Overall score: **0%**
1 -

□ Question 9 of 144



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	Cystine

Dashboard

Overall score: **0%**
1 -

□ Question 10 of 144



A 55-year-old known rheumatoid arthritis patient is admitted via the emergency department with sudden onset severe right upper quadrant pain. She has vomited several times and felt hot and feverish. She has had no diarrhoea. She has been a bit tired over the last few months and recently saw her GP for swelling of her ankles. He prescribed her a short course of furosemide but this has now finished after there was no improvement. She has a past medical history of hypertension. Her regular medication is penicillamine and ramipril. On examination, she is very tender in the right upper quadrant with voluntary guarding. There is no palpable hepatosplenomegaly. She has pitting oedema to the knee. She is has a low-grade fever of 37.5. Her urine dip shows 3+ of protein and 1+ RBCs.

Her blood tests show

Hb	126 g/l
Platelets	458 * 10 ⁹ /l
WBC	9.7 * 10 ⁹ /l
Neutrophils	7.7 * 10 ⁹ /l

Na ⁺	139 mmol/l
K ⁺	4.9 mmol/l
Urea	25 mmol/l
Creatinine	300 µmol/l
CRP	12 mg/l

Bilirubin	20 µmol/l
ALP	189 u/l
ALT	110 u/l
Albumin	26 g/l

What is the most likely cause of her right upper quadrant pain?

	Biliary colic
	Acute cholecystitis
	Acute portal vein thrombosis
	Adult polycystic kidney disease
	Acute viral hepatitis

Dashboard

Overall score: 0%

1 -

□ Question 10 of 144



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	Acute portal vein thrombosis
	Adult polycystic kidney disease
	Acute viral hepatitis

Dashboard

Overall score: **0%**
1 -

□ Question 11 of 144



A 37-year-old patient presents to the Emergency Department with worsening swelling of his legs over the past few weeks. He has never had this problem before. He does not feel short of breath and has no chest pain. His past medical history includes asthma, hepatitis C and depression.

The patient appears to have sunken cheeks and a number of depressions in his skin across his upper arms and chest. On auscultation his chest is clear, heart sounds I+II are present and there are no added sounds. His abdomen is soft and non-tender. He has pitting oedema to the knees bilaterally.

Observations are as follows: temperature 36.3°C, blood pressure 179/111 mmHg, heart rate 89/min, respiratory rate 16/min, saturations 97% on air

Initial investigations are as follows:

Hb	120 g/l
Platelets	$170 \times 10^9/l$
WBC	$9.2 \times 10^9/l$
Neuts	$4.0 \times 10^9/l$
Na ⁺	144 mmol/l
K ⁺	4.9 mmol/l
Urea	12.6 mmol/l
Creatinine	166 μ mol/l
Adjusted calcium	2.35 mmol/l
Albumin	26 g/l

Urine: blood ++, nitrites -ve, leucocytes -ve, protein +++

What is the single most likely underlying diagnosis?

	Diffuse proliferative glomerulonephritis
	Focal segmental glomerulosclerosis
	IgA nephropathy
	Mesangiocapillary glomerulonephritis
	Renal amyloid

Dashboard

Overall score: **0%**

1 -

□ Question 11 of 144



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	Focal segmental glomerulosclerosis
	IgA nephropathy
	Mesangiocapillary glomerulonephritis
	Renal amyloid

Dashboard

Overall score: **0%**
1 -

□ Question 12 of 144



A 29 year-old man presented to his GP with a 1 day history of blood in his urine. He had an upper respiratory tract infection 3 days previously. He was otherwise fit and well and took no regular medications.

On examination, his pulse was 70 beats per minute and his blood pressure was 135/85 mmHg. Urinalysis showed blood 4+ and was negative for protein.

Hb	156 g/l
Platelets	$344 \times 10^9/l$
WBC	$6.0 \times 10^9/l$

Na ⁺	141 mmol/l
K ⁺	4.0 mmol/l
Urea	5.4 mmol/l
Creatinine	85 μ mol/l

What is the most likely diagnosis?

	Membranous nephropathy
	Acute interstitial nephritis
	IgA nephropathy
	Focal segmental glomerulosclerosis
	Minimal change disease

Overall score: **0%**

1 -

□ Question 12 of 144



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	Minimal change disease

Dashboard

Overall score: **0%**

1 -

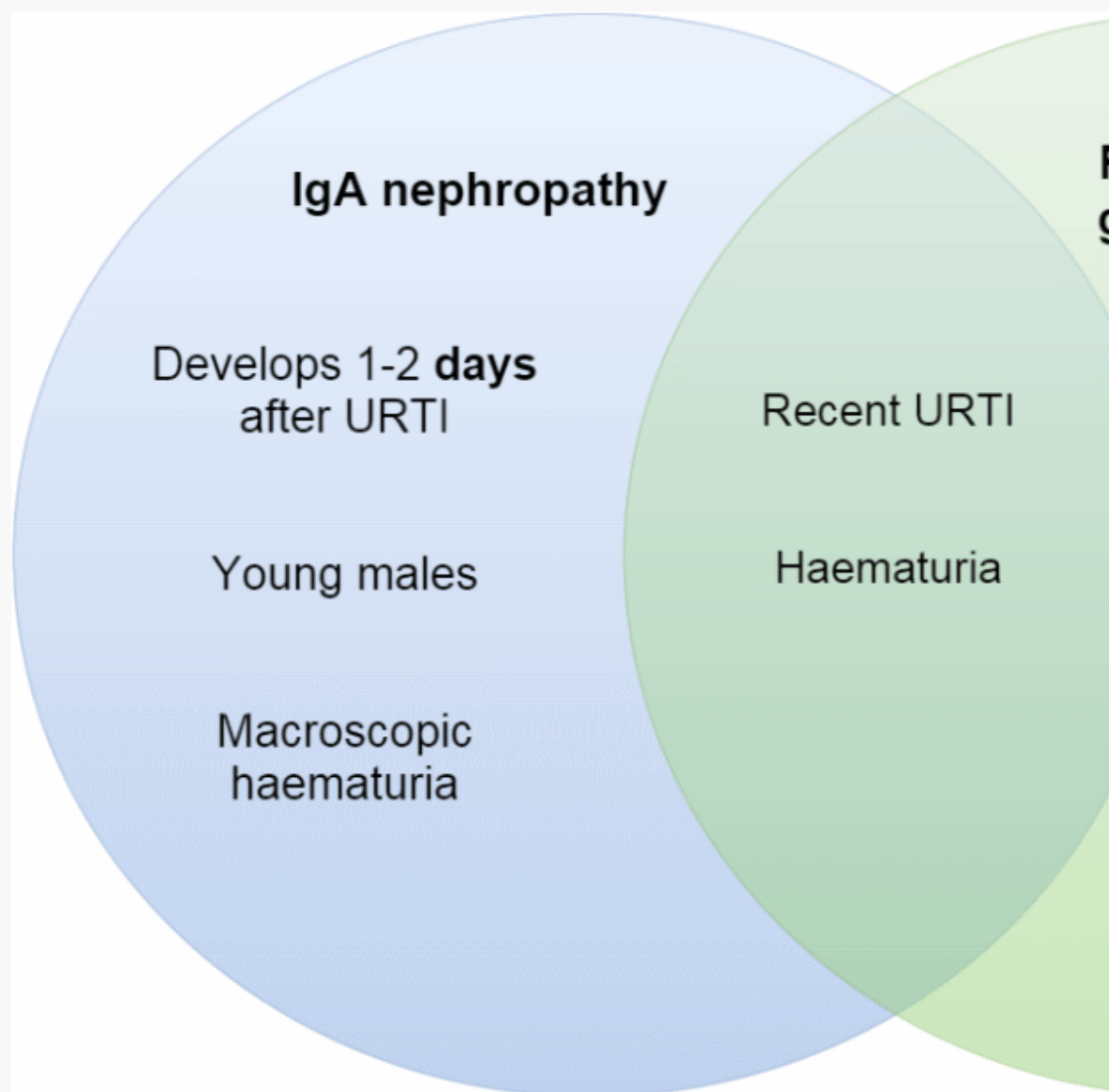
Question 12 of 144

A 29 year-old man presents with macroscopic haematuria and a recent upper respiratory tract infection 3 days previously.

On examination, his pulse was 100/min, blood pressure 140/90 mmHg, and was negative for proteinuria.

Hb	156 g/l
Platelets	$344 \times 10^9/l$
WBC	$6.0 \times 10^9/l$

Na ⁺	141 mmol/l
K ⁺	4.0 mmol/l
Urea	5.4 mmol/l
Creatinine	85 µmol/l



What is the most likely diagnosis?

<input type="radio"/>	Membranous nephropathy
<input type="radio"/>	Acute interstitial nephritis
<input checked="" type="radio"/>	IgA nephropathy
<input type="radio"/>	Focal segmental glomerulosclerosis
<input type="radio"/>	Minimal change disease

Dashboard

Overall score: **0%**

1 -

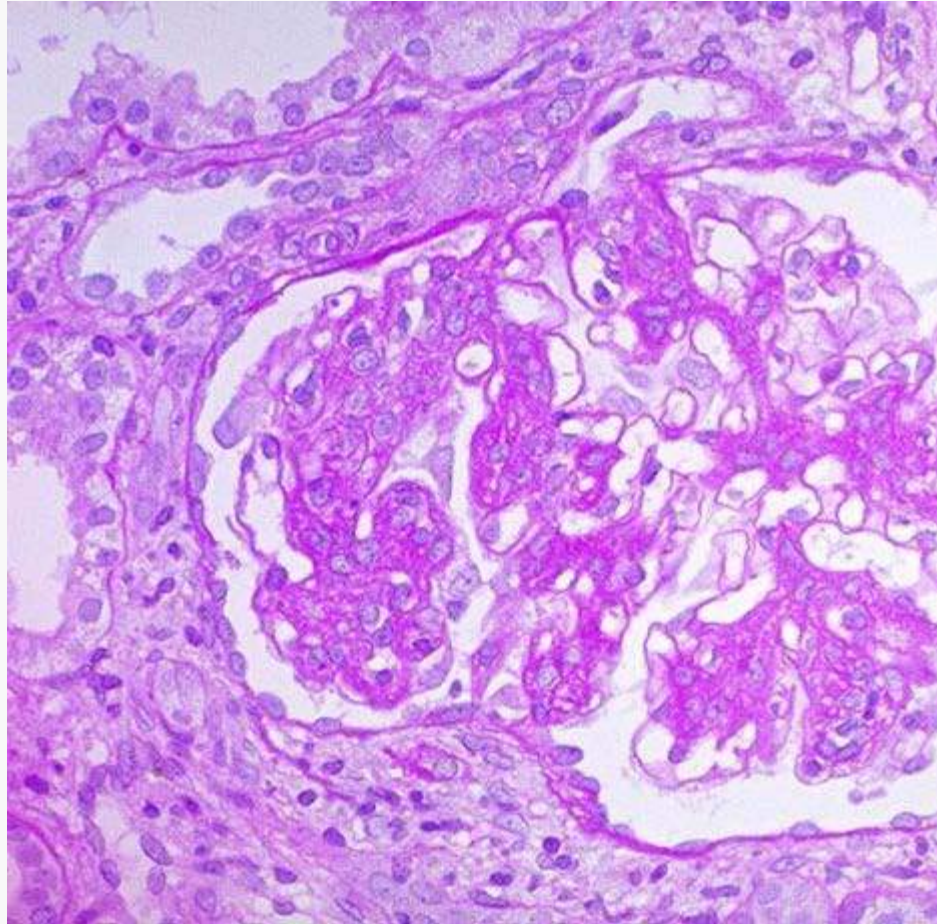
Question 12 of 144

A 29 year-old man presented to his GP with a urinary tract infection 3 days previously. He was otherwise fit and well.

On examination, his pulse was 70 beats per minute, blood pressure 120/80 mmHg, no rales, no leg swelling, no proteinuria 4+ and was negative for protein.

Hb	156 g/l
Platelets	$344 \times 10^9/l$
WBC	$6.0 \times 10^9/l$

Na ⁺	141 mmol/l
K ⁺	4.0 mmol/l
Urea	5.4 mmol/l
Creatinine	85 μ mol/l



What is the most likely diagnosis?

<input type="radio"/>	Membranous nephropathy
<input type="radio"/>	Acute interstitial nephritis
<input checked="" type="radio"/>	IgA nephropathy
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<input type="radio"/>	Minimal change disease

Dashboard

Overall score: **0%**

1 -

Question 12 of 144

□ □

A 29 year-old man presented to his GP with a 1 day history of blood in his urine. He had an upper respiratory tract infection 3 days previously. He was otherwise fit and well and took no regular medications.

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Hb	156 g/l
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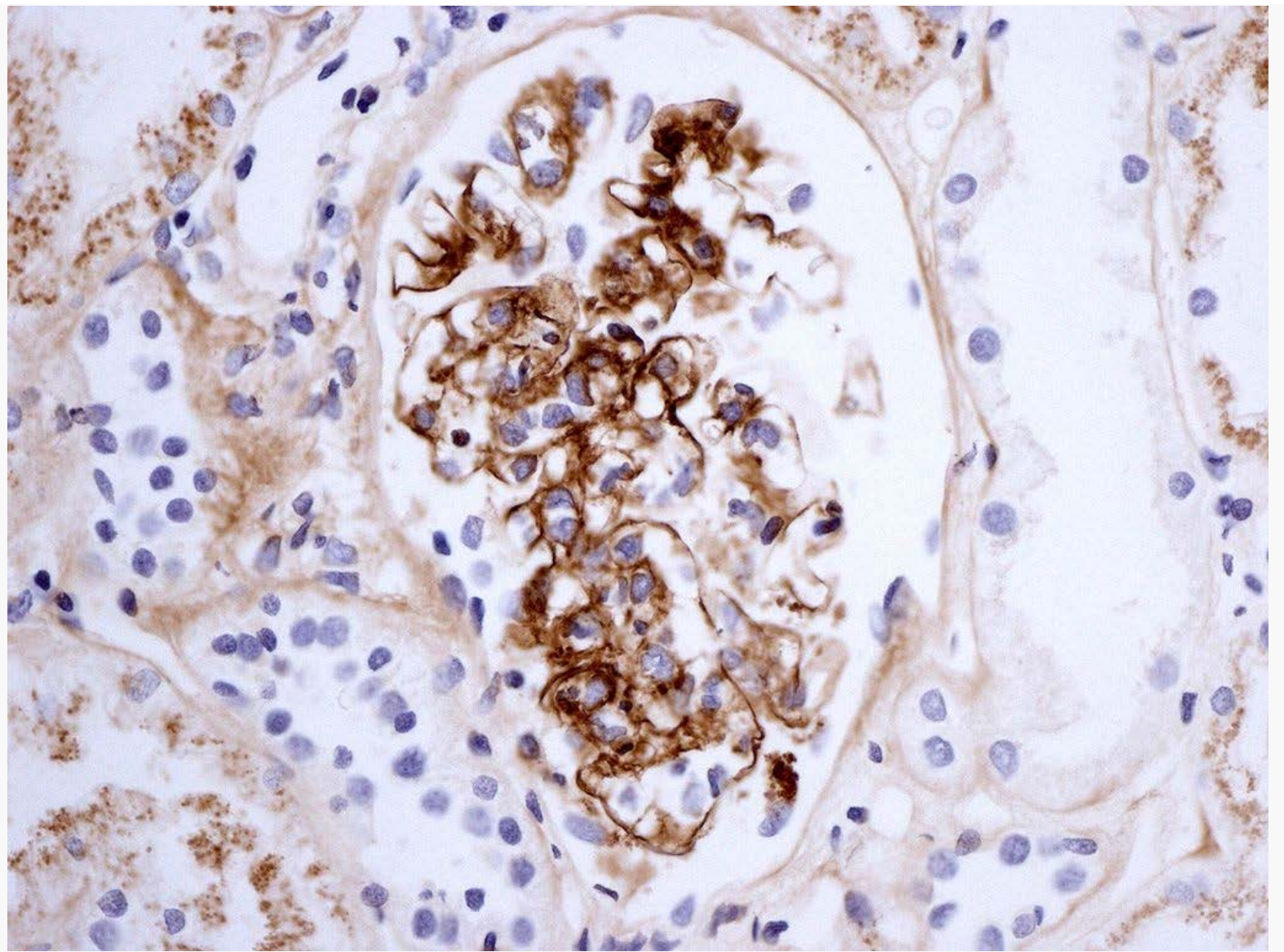
Na ⁺	141 mmol/l
K ⁺	4.0 mmol/l
Urea	5.4 mmol/l
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What is the most likely diagnosis?

	Membranous nephropathy
	Acute interstitial nephritis
	IgA nephropathy
	Focal segmental glomerulosclerosis
	Minimal change disease

Overall score: **0%**

1 -



□ Question 13 of 144



A 45-year-old woman presents with fever, rigors and left iliac fossa pain to the emergency department in Manchester. She has polycystic kidney disease (PKD) and 2 months ago she received a renal transplant on the left side for end-stage renal failure. She is currently on mycophenolate mofetil 1g twice daily and prednisolone 10 mg once daily.

Investigations:

White cell count	16 x 10 ⁶ / dL
Urine Microscopy	White cells + + +, no organisms seen.

Her kidney function tests are as follows:

	Post-Transplant	Current Admission
Urea	4.1 mmol/L	9.1 mmol/L
Creatinine	98 µmol/L	140 µmol/L
Potassium	4.9 mmol/L	5.3 mmol/L

What is the most likely diagnosis?

	Kidney abscess (infection of PKD cyst)
	Iatrogenic renal nephrolithiasis
	Opportunistic fungal infection
	Acute graft rejection
	Chronic graft rejection

Overall score: **0%**

1 -

□ Question 13 of 144



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	Iatrogenic renal nephrolithiasis
	Opportunistic fungal infection
	Acute graft rejection
	Chronic graft rejection

Dashboard

Overall score: **0%**

1 -

□ Question 14 of 144



A 40 year old man attended his General Practitioner and reported ongoing frequency of urination for the past few weeks. The patient reported passing very dilute urine. There was no history of hesitancy of micturition or terminal dribbling.

The patient was also under investigation for suspected liver disease after presenting with mild jaundice 3 weeks previously. Some initial investigations had been completed but hepatology clinic review was still awaited. There was no other past medical history and the patient took no regular or illicit medications. The patient worked as an insurance agent, lived alone and drank only minimal amounts of alcohol.

A summary of initial investigations arranged by the General Practitioner and through endocrine clinic are given below.

Haemoglobin	11.5 g / dL
White cell count	$6.5 \times 10^9/\text{L}$
Neutrophils	$4.2 \times 10^9/\text{L}$
Platelets	$156 \times 10^9/\text{L}$
Urea	9.3 mmol / L
Creatinine	145 micromol / L
Sodium	156 mmol / L
Potassium	3.9 mmol / L
Albumin	30 g / L
Alkaline phosphatase	170 U / L
ALT	150 U / L
Bilirubin	80 micromol / L
Ferritin	439 ng / mL
Serum immunoglobulins	No abnormality detected
Hepatitis viruses	No abnormality detected

Thyroid stimulating hormone	1.0 microU / L (reference 0.4-5.0)
T4 free serum	13.4 pmol / L (reference 8.5-15.2)
Plasma osmolality	390 mmol / L (reference 280-295)
Urine osmolality	80 mmol / L (reference 100-900)
Plasma osmolality (after desmopressin)	267 mmol / L (reference 280-295)
Urine osmolality (after desmopressin)	265 mmol / L (reference 100-900)
Random serum glucose	4.5 mmol / L

What is the cause of the patient's polydipsia?

<input type="checkbox"/>	Nephrogenic diabetes insipidus
<input type="checkbox"/>	Liver cirrhosis secondary to haemachromatosis
<input type="checkbox"/>	Primary polydipsia
<input type="checkbox"/>	Chronic renal failure
<input type="checkbox"/>	Cranial diabetes insipidus

Dashboard

Overall score: **0%**

1 -

□ Question 14 of 144



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	Liver cirrhosis secondary to haemachromatosis
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Dashboard

Overall score: **0%**

1 -

□ Question 15 of 144

□ □

A 71-year-old gentleman is reviewed in hospital prior to discharge after having received treatment for an exacerbation of COPD. His systolic blood pressure has been recorded as measuring between 138mmHg to 156mmHg. He has a background of ischaemic heart disease, gout, gallstones and a fractured neck of femur which was repaired with a dynamic hip screw. He is found to have ACR of 31mg/mmol. He normally takes allopurinol, aspirin, tiotropium, Symbicort, salbutamol.

What is the most appropriate pharmacological management for his hypertension?

	ACE-inhibitor
	Calcium channel blocker
	Thiazide-like diuretic
	Beta-blocker
	Alpha-blocker

Dashboard

Overall score: 0%

1 -

Question 15 of 144

□ □

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1 -

□ Question 15 of 144

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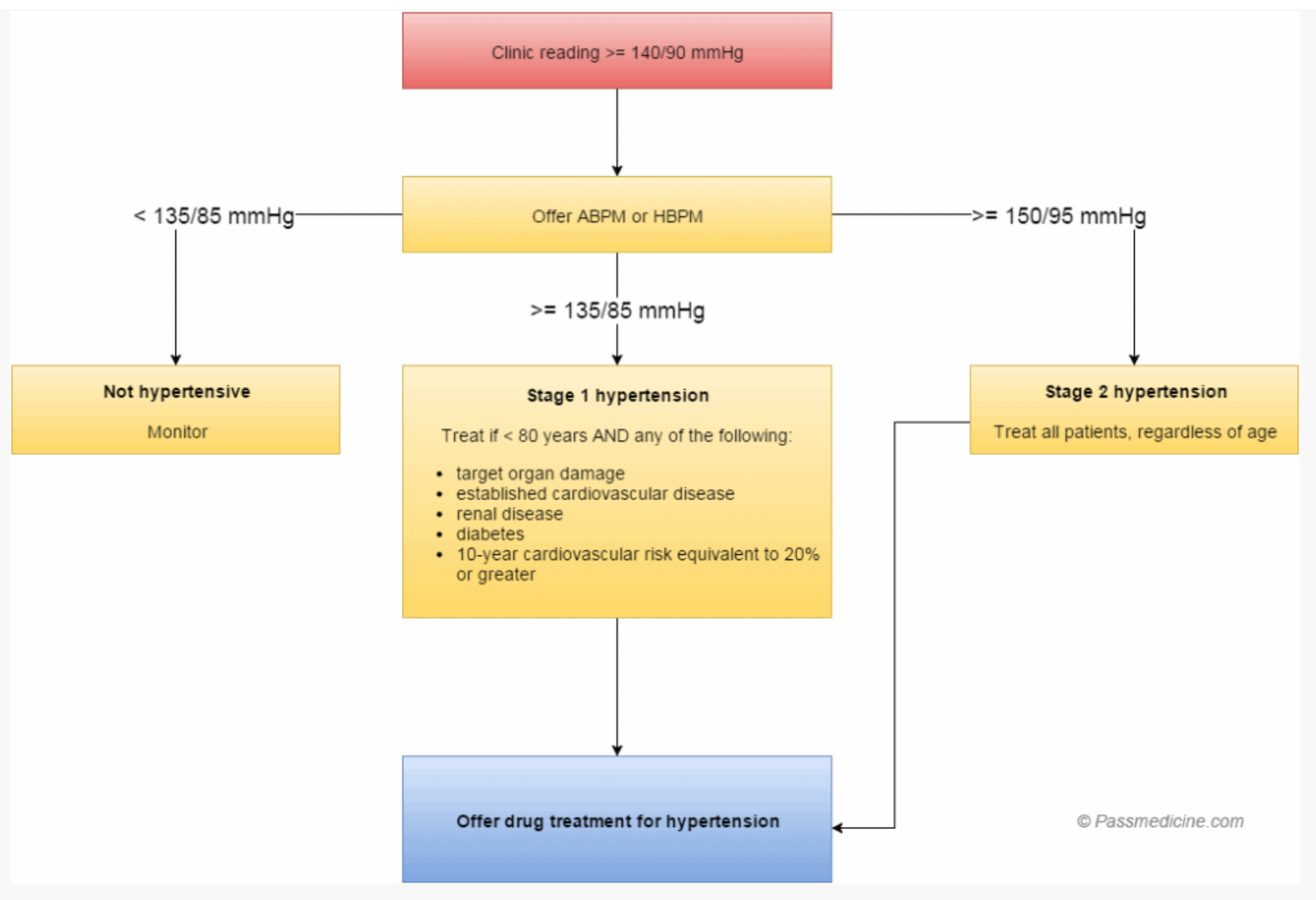
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□ Question 15 of 144

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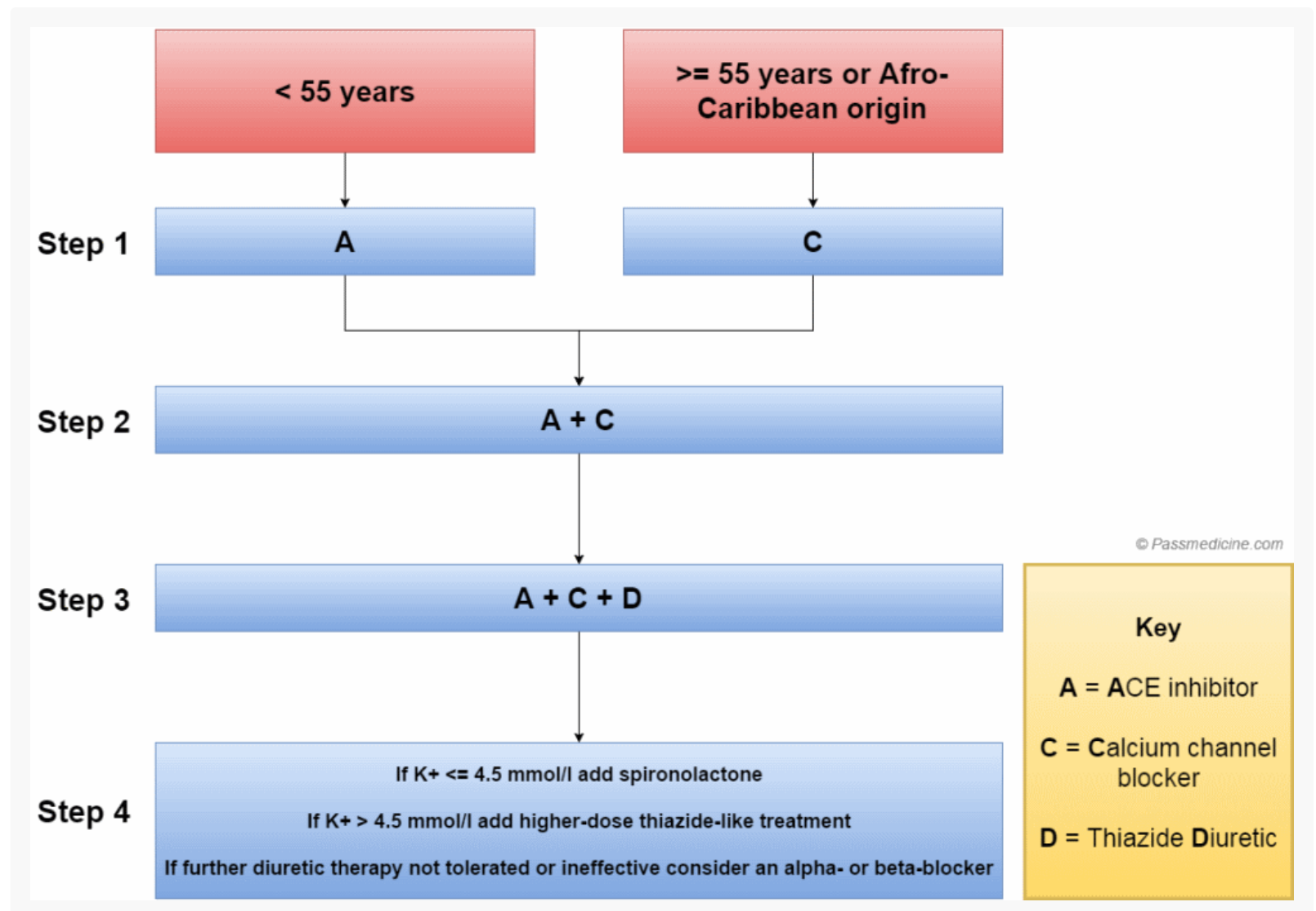
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	Beta-blocker
	Alpha-blocker

Dashboard

Overall score: 0%

1 -



□ Question 16 of 144



A 30-year-old woman with systemic lupus erythematosus is seen in the rheumatology clinic for annual follow-up. Recently she has felt well in herself and continues on hydroxychloroquine. She has not required additional steroid or analgesia for the last three years.

Her routine blood tests are as follows:

Hb	112 g/l	Na ⁺	136 mmol/l
Platelets	252 * 10 ⁹ /l	K ⁺	4.9 mmol/l
WBC	6 * 10 ⁹ /l	Urea	15 mmol/l
Neuts	4.5 * 10 ⁹ /l	Creatinine	180 µmol/l
Lymphs	1 * 10 ⁹ /l	CRP	23 mg/l

Her urine dipstick shows 3+ blood and 2+ protein.

Given that her renal function was previously normal, her rheumatologist refers her for ultrasound kidneys which shows normal sized kidneys with no hydronephrosis and normal renal artery dopplers.

Following discussion at MDT, it is recommended she undergo kidney biopsy for suspected lupus nephritis.

Which class of lupus nephritis would carry the worst prognosis?

	Focal
	Diffuse
	Minimal mesangial
	Mesangial proliferative
	Membranous

Dashboard

Overall score: **0%**

1 -

□ Question 16 of 144



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	Focal
	Diffuse
	Minimal mesangial
	Mesangial proliferative
	Membranous

Dashboard

Overall score: **0%**

1 -

☐ Question 17 of 144

A 60 year female with end-stage renal failure is referred to the medical assessment unit with painful legs. She has a past history of atrial fibrillation, rheumatoid arthritis and osteoporosis. On examination she has 3 discrete, painful, necrotic skin lesions on her left calf. There is minimal surrounding erythema and her foot appears well-perfused. Peripheral pulses are present.

Blood tests reveal:

Adjusted calcium	2.62 mmol/l
Parathyroid hormone	47 pmol/l

Which of her regular medications is contributing to her acute presentation?

<input type="checkbox"/>	Sevelamer
<input type="checkbox"/>	Methotrexate
<input type="checkbox"/>	Hydroxychloroquine
<input type="checkbox"/>	Warfarin
<input type="checkbox"/>	Ferrous fumarate

Dashboard

Overall score: **0%**

1 -

□ Question 17 of 144



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Blood tests reveal:

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Which of her regular medications is contributing to her acute presentation?

	Sevelamer
	Methotrexate
	Hydroxychloroquine
	Warfarin
	Ferrous fumarate

Dashboard

Overall score: **0%**

1 -

□ Question 18 of 144



You are called to the haematology ward during an evening on-call to review an elective chemotherapy patient. A 23-year-old male was electively admitted to start chemotherapy for Hodgkin's lymphoma the following day and is reporting pain in his left flank. He is currently under investigation by the renal physicians for deteriorating creatinine of unknown cause for the past 4 months, does not take regular medications, smokes about 10 cigarettes every day and occasionally smokes marijuana.

On examination, the patient has bilateral lower limb non-pitting oedema to knees. You note a left varicocele and mild bilateral scrotal oedema. His heart sounds and auscultation of his chest is unremarkable. Abdominal examination reveals only mild left renal angle tenderness. A urine dip reveals 4+ blood, 2+ protein, normal pH. On review of his old clinic letters, you note a renal biopsy from 2 months prior to show IgG and complement deposits on the basement membrane.

His current serum results are:

K ⁺	5.4 mmol/l
Urea	12.8 mmol/l
Creatinine	212 µmol/l
Albumin	18 g/l

What is the most likely acute diagnosis?

	Renal vein thrombosis
	Renal calculus
	IgA nephropathy
	Anti-glomerular basement membrane disease
	Membranoproliferative glomerulonephritis

Overall score: **0%**

1 -

□ Question 18 of 144



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What is the most likely acute diagnosis?

	Renal vein thrombosis
	Renal calculus
	IgA nephropathy
	Anti-glomerular basement membrane disease
	Membranoproliferative glomerulonephritis

Dashboard

Overall score: **0%**

1 -

Question 18 of 144

You are called to the haematology ward during the night. A 55-year-old male was electively admitted to start chemotherapy for his pancreatic cancer. He has been experiencing severe pain in his left flank. He is currently under investigation for the cause of the pain for the past 4 months, does not take regular painkillers, does not smoke, does not drink alcohol, and does not take recreational drugs.

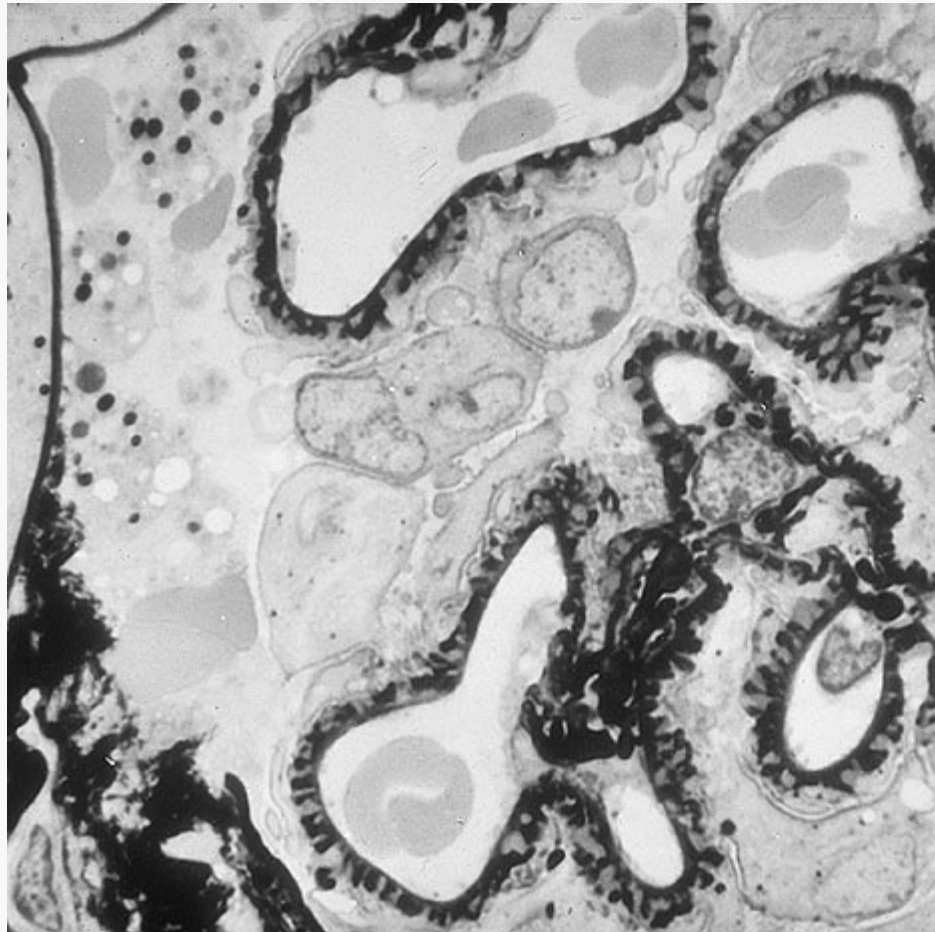
On examination, the patient has bilateral lower abdominal tenderness. His heart sounds and lungs are normal. His blood pressure is 120/80 mmHg. A urine dipstick shows blood and protein. A renal biopsy from 2 months ago showed glomerular disease.

His current serum results are:

K ⁺	5.4 mmol/l
Urea	12.8 mmol/l
Creatinine	212 µmol/l
Albumin	18 g/l

What is the most likely acute diagnosis?

<input checked="" type="radio"/>	Renal vein thrombosis
<input type="radio"/>	Renal calculus
<input type="radio"/>	IgA nephropathy
<input type="radio"/>	Anti-glomerular basement membrane disease
<input type="radio"/>	Membranoproliferative glomerulonephritis



Dashboard

Overall score: **0%**

1 -

Question 19 of 144



A 78-year-old female presents to the Emergency Department with confusion, nausea and vomiting. She has been generally unwell with fatigue, weakness and fevers for 4 weeks. On examination her respiratory rate is 26/min, oxygen saturations are 98% on 4 litres of oxygen, blood pressure 100/65 mmHg, pulse 120/min and temperature is 36.3°C. Her airway is patent and crepitations are present at both bases. There are crusting lesions beneath both nostrils, the pulse is thready and regular, heart sounds are normal and her abdomen is soft non-tender. Electrocardiogram shows a sinus tachycardia and urine dip showed 3+ blood and protein. Arterial blood gas on 4 litres of oxygen is as follows:

pH	7.35
pO ₂	7.79 kPa
pCO ₂	3.52 kPa
Bicarbonate	17 mmol/l
Base Excess	-6.9 mmol/l
Lactate	4.5 mmol/l

Venous blood analysis is as follows:

Hb	119 g/l	Na ⁺	129 mmol/l
Platelets	511 * 10 ⁹ /l	K ⁺	6.2 mmol/l
WBC	19.1 * 10 ⁹ /l	Urea	42.1 mmol/l
Neuts	17.2 * 10 ⁹ /l	Creatinine	497 µmol/l
Lymphs	1.8 * 10 ⁹ /l	CRP	241 mg/l
Eosin	0.04 * 10 ⁹ /l		

The patient was resuscitated with fluids and antibiotics although the full septic screen was negative and renal function remained poor. ANA and cANCA pattern were positive with PR3 antibodies found and the renal team were involved. What is the most likely underlying diagnosis?

	Lymphoma
	Churg-Strauss syndrome
	Granulomatosis with polyangiitis
	Acute myeloid leukaemia
	Goodpasture's syndrome

Dashboard

Overall score: **0%**

1 -

Question 19 of 144



A 78-year-old female presents to the Emergency Department with confusion, nausea and vomiting. She has been generally unwell with fatigue, weakness and fevers for 4 weeks. On examination her respiratory rate is 26/min, oxygen saturations are 98% on 4 litres of oxygen, blood pressure 100/65 mmHg, pulse 120/min and temperature is 36.3°C. Her airway is patent and crepitations are present at both bases. There are crusting lesions beneath both nostrils, the pulse is thready and regular, heart sounds are normal and her abdomen is soft non-tender. Electrocardiogram shows a sinus tachycardia and urine dip showed 3+ blood and protein. Arterial blood gas on 4 litres of oxygen is as follows:

pH	7.35
pO ₂	7.79 kPa
pCO ₂	3.52 kPa
Bicarbonate	17 mmol/l
Base Excess	-6.9 mmol/l
Lactate	4.5 mmol/l

Venous blood analysis is as follows:

Hb	119 g/l	Na ⁺	129 mmol/l
Platelets	511 * 10 ⁹ /l	K ⁺	6.2 mmol/l
WBC	19.1 * 10 ⁹ /l	Urea	42.1 mmol/l
Neuts	17.2 * 10 ⁹ /l	Creatinine	497 µmol/l
Lymphs	1.8 * 10 ⁹ /l	CRP	241 mg/l
Eosin	0.04 * 10 ⁹ /l		

The patient was resuscitated with fluids and antibiotics although the full septic screen was negative and renal function remained poor. ANA and cANCA pattern were positive with PR3 antibodies found and the renal team were involved. What is the most likely underlying diagnosis?

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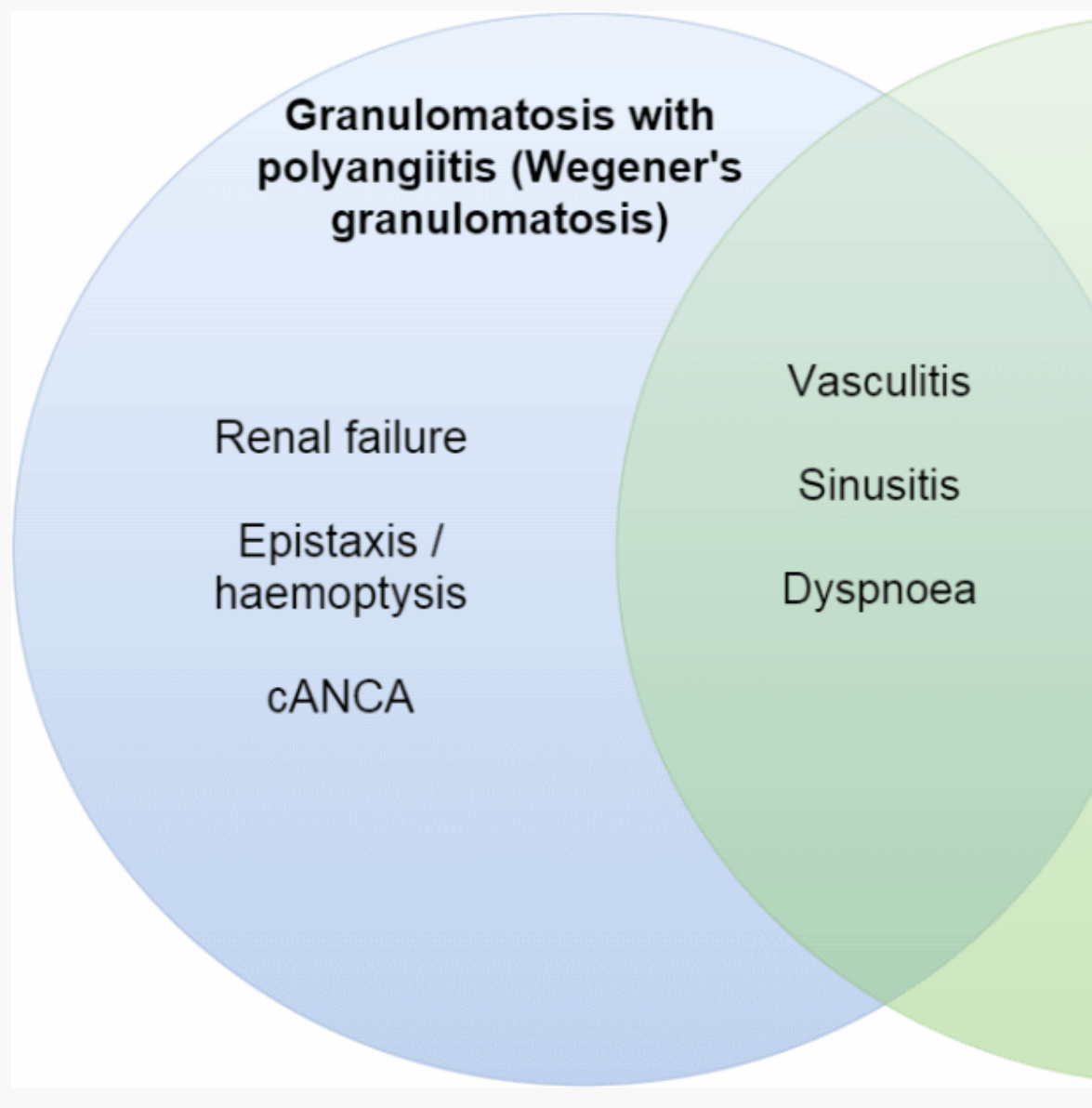
Dashboard

Overall score: **0%**
1 -

Question 19 of 144

A 78-year-old female presents with a 2-week history of being generally unwell with fatigue and weight loss. Her oxygen saturations are 98% on 4 litres of oxygen. Her airway is patent and crepitations are heard throughout. Her heart sounds are thready and regular, heart rate is 100 bpm. She has tachycardia and urine dipstick shows blood and protein.

pH	7.35
pO ₂	7.79 kPa
pCO ₂	3.52 kPa
Bicarbonate	17 mmol/l
Base Excess	-6.9 mmol/l
Lactate	4.5 mmol/l



Venous blood analysis is as follows:

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WBC	19.1 * 10 ⁹ /l	Urea	42.1 mmol/l
Neuts	17.2 * 10 ⁹ /l	Creatinine	497 µmol/l
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Eosin	0.04 * 10 ⁹ /l		

The patient was resuscitated with fluids and antibiotics although the full septic screen was negative and renal function remained poor. ANA and cANCA pattern were positive with PR3 antibodies found and the renal team were involved. What is the most likely underlying diagnosis?

	Lymphoma
	Churg-Strauss syndrome
	Granulomatosis with polyangiitis
	Acute myeloid leukaemia
	Goodpasture's syndrome

Dashboard

Overall score: **0%**
1 -

□ Question 19 of 144



A 78-year-old female presents to the Emergency Department with confusion, nausea and vomiting. She has been generally unwell with fatigue, weakness and fevers for 4 weeks. On examination her respiratory rate is 26/min, oxygen saturations are 98% on 4 litres of oxygen, blood pressure 100/65 mmHg, pulse 120/min and temperature is 36.3°C. Her airway is patent and crepitations are present at both bases. There are crusting lesions beneath both nostrils, the pulse is thready and regular, heart sounds are normal and her abdomen is soft non-tender. Electrocardiogram shows a sinus tachycardia and urine dip showed 3+ blood and protein. Arterial blood gas on 4 litres of oxygen is as follows:

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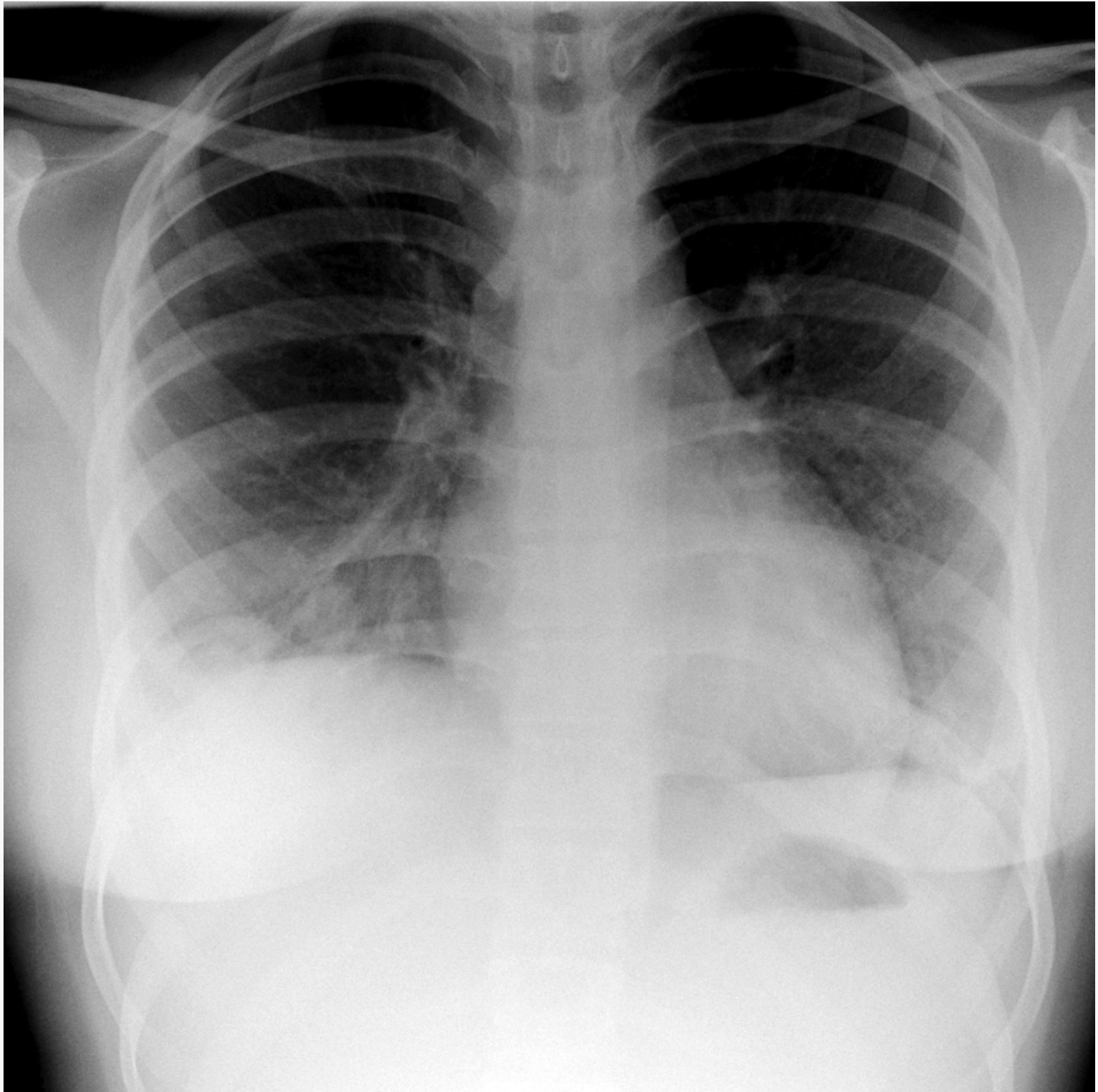
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Lymphoma

	Churg-Strauss syndrome
	Granulomatosis with polyangiitis
	Acute myeloid leukaemia
	Goodpasture's syndrome

Dashboard

Overall score: **0%**
1 -



□ Question 19 of 144



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The patient was resuscitated with fluids and antibiotics although the full septic screen was negative and renal function remained poor. ANA and cANCA pattern were positive with PR3 antibodies found and the renal team were involved. What is the most likely underlying diagnosis?

Lymphoma

	Churg-Strauss syndrome
	Granulomatosis with polyangiitis
	Acute myeloid leukaemia
	Goodpasture's syndrome

Dashboard

Overall score: **0%**
1 -



□ Question 20 of 144

□ □

A 58-year-old Caucasian man with a background of type 2 diabetes mellitus presents to the GP with worsening pedal oedema. On further questioning, he reports having previously had weight loss and alteration in his bowel habit over the past six months.

On examination, he is unkempt, and there is pitting oedema to both thighs and sacral oedema, Lungs are clear, the cardiac examination is unremarkable and the JVP is not elevated. Abdominal exam is unremarkable, as is a digital rectal examination. Urine dip shows protein +++ but is otherwise negative.

Hb	78 g/l	Na ⁺	135 mmol/l	Bilirubin	20 µmol/l
Platelets	340 * 10 ⁹ /l	K ⁺	3.7 mmol/l	ALP	14 u/l
WBC	12 * 10 ⁹ /l	Urea	6 mmol/l	ALT	80 u/l
Neuts	3 * 10 ⁹ /l	Creatinine	67 µmol/l	gamma#GT	30 u/l
Lymphs	7 * 10 ⁹ /l			Albumin	18 g/l
Eosin	0.1 * 10 ⁹ /l	MCV	82 fl		

What is the most likely diagnosis?

	Alcoholic cirrhosis
	Hypoalbuminaemia secondary to poor nutritional status
	Diabetic kidney disease
	Congestive cardiac failure
	Membranous glomerulonephritis secondary to colorectal cancer

Overall score: **0%**

1 -

□ Question 20 of 144

□ □

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Lymphs	7 * 10 ⁹ /l			Albumin	18 g/l
Eosin	0.1 * 10 ⁹ /l	MCV	82 fl		

What is the most likely diagnosis?

	Alcoholic cirrhosis
	Hypoalbuminaemia secondary to poor nutritional status
	Diabetic kidney disease
	Congestive cardiac failure
	Membranous glomerulonephritis secondary to colorectal cancer

Overall score: **0%**

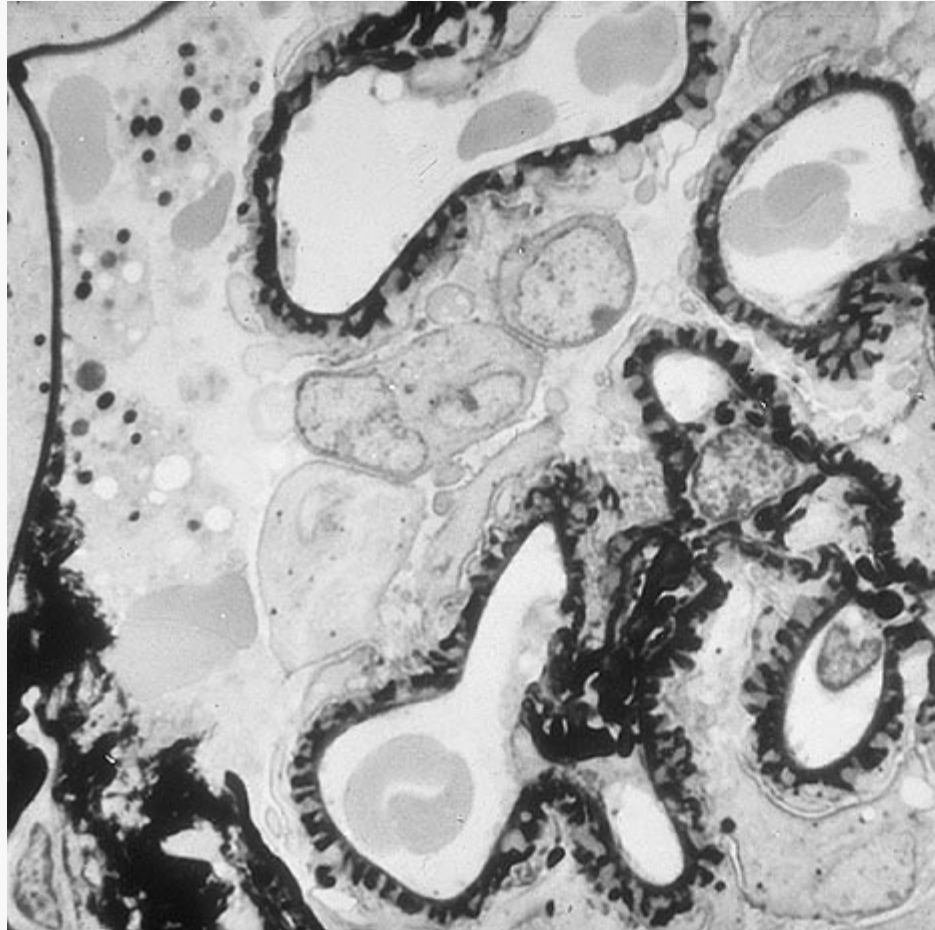
1 -

Question 20 of 144

A 58-year-old Caucasian man with a background of chronic liver disease and peripheral oedema. On further questioning, he reports having lost weight over the past six months.

On examination, he is unkempt, and there is peripheral oedema. Cardiac examination is unremarkable and the JVP is raised. Urine dip shows protein +++ but is otherwise negative.

Hb	78 g/l	Na ⁺	135 mmol/l		
Platelets	340 * 10 ⁹ /l	K ⁺	3.7 mmol/l		
WBC	12 * 10 ⁹ /l	Urea	6 mmol/l		
Neuts	3 * 10 ⁹ /l	Creatinine	67 µmol/l	gamma-GT	30 u/l
Lymphs	7 * 10 ⁹ /l			Albumin	18 g/l
Eosin	0.1 * 10 ⁹ /l	MCV	82 fl		



What is the most likely diagnosis?

<input type="radio"/>	Alcoholic cirrhosis
<input type="radio"/>	Hypoalbuminaemia secondary to poor nutritional status
<input type="radio"/>	Diabetic kidney disease
<input type="radio"/>	Congestive cardiac failure
<input checked="" type="radio"/>	Membranous glomerulonephritis secondary to colorectal cancer

Overall score: **0%**

1 -

Question 21 of 144



A 59-year-old lady comes to the blood pressure clinic with accelerated hypertension which isn't responding to lifestyle modifications.

The patient denies any headaches or blurred vision. However, she admits to a chronic cough and frequently passes pale, loose stools. She frequently gets cold hands and tells you they go red, white and then blue in the winter.

On examination, she is a thin lady with a blood pressure of 190/100 mmHg and a heart rate of 68 beats per minute. Although her nails are a normal colour she has tight, shiny skin over her hands. An ECG shows sinus rhythm.

Hb	106 g/l
Platelets	451 * 10 ⁹ /l
WBC	8.9 * 10 ⁹ /l
Na ⁺	136 mmol/l
K ⁺	4.9 mmol/l
Urea	7.1 mmol/l
Creatinine	174 µmol/l

Which of the following is the most appropriate initial therapy?

	Bisoprolol
	Candesartan
	Captopril
	Indapamide
	Amlodipine

Dashboard

Overall score: **0%**

1 -

Question 21 of 144



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	Bisoprolol
	Candesartan
	Captopril
	Indapamide
	Amlodipine

Dashboard

Overall score: **0%**

1 -

Question 21 of 144

A 59-year-old lady comes to the blood pressure clinic for modifications.

The patient denies any headaches or blurred vision. She is pale, loose stools. She frequently gets cold hands and

On examination, she is a thin lady with a blood pressure of 160/90 mmHg. Although her nails are a normal colour she has tight



Hb	106 g/l
Platelets	451 * 10 ⁹ /l
WBC	8.9 * 10 ⁹ /l
Na ⁺	136 mmol/l
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Which of the following is the most appropriate initial therapy?

	Bisoprolol
	Candesartan
	Captopril
	Indapamide
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Dashboard

Overall score: **0%**

1 -

Question 21 of 144

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Which of the following is the most appropriate initial therapy?

<input type="radio"/>	Bisoprolol
<input type="radio"/>	Candesartan
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<input type="radio"/>	Amlodipine

Dashboard

Overall score: **0%**

1 -

Question 21 of 144

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Na ⁺	136 mmol/l
K ⁺	4.9 mmol/l
Urea	7.1 mmol/l
Creatinine	174 µmol/l



Which of the following is the most appropriate initial therapy?

	Bisoprolol
	Candesartan
	Captopril
	Indapamide
	Amlodipine

Dashboard

Overall score: **0%**

1 -

Question 22 of 144



A 36 year old female patient presents to the endocrinology clinic to see you for follow up. She reports a 1 year history of thirst and drinking a lot of water. She has had a normal fasting glucose and oral glucose tolerance test. On her previous visit, you booked the patient for a water deprivation test and the results are available:

Time	Urine osmolality (mOsm/kg)	Serum osmolality (mOsm/kg)	Weight (kg)	% change in weight
0800	263	263	86.1	n/a
1000	265	278	85.7	-0.46%
1200	279	289	85.4	-0.81%
1400	280	295	84.9	-1.39%
1600	285	301	84.6	-1.74%
1700 DDAVP given	-	-		
1800	286	302	84.3	-2.09%
2000	289	303	84.1	-2.32%

What is the underlying cause of this lady's symptoms?

	Nephrogenic diabetes insipidus
	Psychogenic polydipsia
	Cranial diabetes insipidus

	Partial cranial diabetes insipidus
	None of the above

Dashboard

Overall score: **0%**

1 -

Question 22 of 144

A 36 year old female patient presents to the endocrinology clinic to see you for follow up. She reports a 1 year history of thirst and drinking a lot of water. She has had a normal fasting glucose and oral glucose tolerance test. On her previous visit, you booked the patient for a water deprivation test and the results are available:

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1600	285	301	84.6	-1.74%
1700 DDAVP given	-	-		
1800	286	302	84.3	-2.09%
2000	289	303	84.1	-2.32%

What is the underlying cause of this lady's symptoms?

	Nephrogenic diabetes insipidus
	Psychogenic polydipsia
	Cranial diabetes insipidus

	Partial cranial diabetes insipidus
	None of the above

Dashboard

Overall score: **0%**
1 -

Question 23 of 144

□ □

A 39-year-old female with end-stage renal failure secondary to IgA nephropathy is admitted to hospital. She was discharged 3 days earlier following an admission due to collapse in the context of hyperkalaemia (Potassium 7.8 mmol/l). She has been transferred to the medical assessment unit having developed rigors on dialysis earlier today.

Bloods taken at the end of dialysis reveal:

White cell count	15.2 *10 ⁹ /l
Sodium	134 mmol/l
Potassium	2.1 mmol/l
Urea	10.6 mmol/l
Creatinine	400 µmol/l
C-reactive protein (CRP)	119 mg/dL

What is the immediate priority in her management?

	Replace potassium (K ⁺)
	Replace magnesium (Mg ²⁺)
	Intravenous antibiotics
	Intravenous calcium gluconate
	Insulin/dextrose infusion

Overall score: **0%**

1 -

□ Question 23 of 144

□ □

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	Intravenous antibiotics
	Intravenous calcium gluconate
	Insulin/dextrose infusion

[Dashboard](#)

Overall score: **0%**

1 -

Question 24 of 144

□ □

You are the medical doctor on an acute medical admissions unit. A 56-year old female with hypertension, pulmonary fibrosis and a recent diagnosis of Raynaud's phenomenon presents with generally feeling unwell. On further questioning she also reports dysphagia for the past few months for which she is awaiting investigations under the gastroenterology team at your hospital. She is currently only on amlodipine 5mg od.

Her observations are: temperature 36.4°C, pulse 88/min, blood pressure 172/88 mmHg, respiratory rate 14/min, sats 100% on room air. Her chest is clear and abdomen soft, non-tender. Blood tests reveal an acute kidney injury with: sodium 141 mmol/l, potassium 4.6 mmol/l, urea 27 mmol/l, creatinine 320 µmol/l (her GP notes state she had a normal renal function from a routine blood test 1 month ago).

What is the most appropriate treatment at this stage?

	Fluids
	Stat 5mg amlodipine
	Stat angiotensin-converting enzyme inhibitor (ACE-i)
	Haemodialysis
	Haemofiltration

Dashboard

Overall score: 0%

1 -

Question 24 of 144

□ □

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	Stat 5mg amlodipine
	Stat angiotensin-converting enzyme inhibitor (ACE-i)
	Haemodialysis
	Haemofiltration

Dashboard

Overall score: **0%**

1 -

Question 24 of 144

You are the medical doctor on an acute medical admission. A 55-year-old female with a long history of rheumatoid arthritis and a recent diagnosis of Raynaud's phenomenon presents to you. She also reports dysphagia for the past few months. She is currently only on amlodipine.

Her observations are: temperature 36.4°C, pulse 88 bpm, SpO₂ 100% on room air. Her chest is clear and abdomen is soft. Her blood tests show: sodium 141 mmol/l, potassium 4.6 mmol/l, urea 27 mg/dl. She had a renal function from a routine blood test 1 month ago.

What is the most appropriate treatment at this stage?



	Fluids
	Stat 5mg amlodipine
	Stat angiotensin-converting enzyme inhibitor (ACE-i)
	Haemodialysis
	Haemofiltration

Dashboard

Overall score: 0%

1 -

Question 24 of 144

You are the medical doctor on an acute medical admission. A 55-year-old female patient with a long history of systemic sclerosis and a recent diagnosis of Raynaud's phenomenon presents to you. She also reports dysphagia for the past few months. She is currently only on amlodipine 5mg daily as part of her primary care team at your hospital.

Her observations are: temperature 36.4°C, pulse 88bpm, respiratory rate 16, SpO2 100% on room air. Her chest is clear and abdomen is soft. Her renal function from a routine blood test 1 month ago is normal: sodium 141 mmol/l, potassium 4.6 mmol/l, urea 27 mg/dl.

What is the most appropriate treatment at this stage?



	Fluids
	Stat 5mg amlodipine
	Stat angiotensin-converting enzyme inhibitor (ACE-i)
	Haemodialysis
	Haemofiltration

Dashboard

Overall score: 0%

1 -

Question 24 of 144

You are the medical doctor on an acute medical admission. A 55-year-old female with a long history of hypertension, chronic kidney disease, and a recent diagnosis of Raynaud's phenomenon presents to you. She also reports dysphagia for the past few months. She is currently only on amlodipine 5mg daily.

Her observations are: temperature 36.4°C, pulse 88bpm, respiratory rate 18, oxygen saturation 100% on room air. Her chest is clear and abdomen is soft. Her latest blood test shows sodium 141 mmol/l, potassium 4.6 mmol/l, urea 27 mg/dl, creatinine 1.2 mg/dl.

What is the most appropriate treatment at this stage?



	Fluids
	Stat 5mg amlodipine
	Stat angiotensin-converting enzyme inhibitor (ACE-i)
	Haemodialysis
	Haemofiltration

Dashboard

Overall score: 0%

1 -

Question 25 of 144

□ □

You are the medical doctor on an acute medical admissions unit. A 38-year old female with hypertension is referred by her GP for renal impairment which was found on a routine blood test. She feels well and denies any diarrhoea or vomiting. Her examination was normal and observations reveal a slightly raised blood pressure of 148/86 mmHg. She is usually on ramipril 5mg od and has been taking it for the past 3 years, since her diagnosis of hypertension. The last ultrasound of her kidneys was 2 months ago and it was reported as normal.

Blood tests:

Na ⁺	141 mmol/l
K ⁺	4.6 mmol/l
Urea	11.2 mmol/l
Creatinine	182 µmol/l (baseline 54)
eGFR	52 ml/min (baseline > 90)

What is the most likely cause for her presentation?

	Side effect of ramipril
	Cushing's syndrome
	Conn's syndrome
	Fibromuscular dysplasia
	Hypertensive nephropathy

Overall score: **0%**

1 -

Question 25 of 144

□ □

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Blood tests:

Na ⁺	141 mmol/l
K ⁺	4.6 mmol/l
Urea	11.2 mmol/l
Creatinine	182 µmol/l (baseline 54)
eGFR	52 ml/min (baseline > 90)

What is the most likely cause for her presentation?

	Side effect of ramipril
	Cushing's syndrome
	Conn's syndrome
	Fibromuscular dysplasia
	Hypertensive nephropathy

Overall score: **0%**

1 -

Question 26 of 144



A 25 year-old man is referred by his GP with a four week history of bilateral pitting oedema of his legs up to his knees. The only other symptoms he has noticed is some puffiness around the eyes that occurs several times a week and lasts a couple of hours each time. He has no past medical history and reports no rash or musculoskeletal problems. He also has no family history.

Examination reveals bilateral pitting oedema of the legs up to the knees, facial oedema and mild ascites.

Blood tests reveal:

Na ⁺	135 mmol/l
K ⁺	3.4 mmol/l
Urea	4.1 mmol/l
Creatinine	71 µmol/l
Albumin	18 g/l
Cholesterol	11.2 mmol/l

What is the most likely cause of this patient's symptoms?

<input type="checkbox"/>	IgA nephropathy
<input type="checkbox"/>	Post-infectious glomerulonephritis
<input type="checkbox"/>	Minimal change disease
<input type="checkbox"/>	Systemic lupus erythematosus
<input type="checkbox"/>	Diabetic nephropathy

Overall score: **0%**

1 -

Question 26 of 144



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Albumin	18 g/l
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What is the most likely cause of this patient's symptoms?

	IgA nephropathy
	Post-infectious glomerulonephritis
	Minimal change disease
	Systemic lupus erythematosus
	Diabetic nephropathy

Dashboard

Overall score: **0%**

1 -

□ Question 27 of 144



A 32 year old man attended his GP feeling generally unwell with headaches and nasal congestion. These symptoms had been ongoing for 4 weeks and did not seem to be responding to over-the-counter decongestants and flu remedies. He also had recurrent nose bleeds and had coughed up fresh blood on two or three occasions. On further questioning he also had some night sweats. He had otherwise been well with no past medical history and took no regular medications.

His GP was concerned about his symptoms and took some blood tests:

Haemoglobin	97 g/L	Sodium	138 mmol/L
Platelets	$169 \times 10^9/L$	Potassium	5.8 mmol/L
White cell count	$10.0 \times 10^9/L$	Urea	13.5 mmol/L
Neutrophils	$5.5 \times 10^9/L$	Creatinine	367 micromol/L
Eosinophils	$0.3 \times 10^9/L$	Albumin	32 g/L
ESR	19 mm/h	Bilirubin	8 micromol/L
CRP	24 mg/L	ALT	27 iu/L
Alkaline Phosphatase	35 iu/L		

On receiving these results the GP admitted the patient to hospital to investigate reasons for the raised creatinine. Additional tests showed:

Urine dip	protein +++ and blood ++
Urinary protein creatinine ratio (PCR)	224

Chest X-ray multiple, well demarcated and round lesions in both lungfields

c-ANCA	positive with high PR3 titres
p-ANCA	negative

Anti-glomerular basement membrane (Anti-GBM) antibodies	negative
Compliment levels	normal

Given the most likely diagnosis, what type of glomerulonephritis (GN) would you expect to see on a renal biopsy?

<input type="radio"/>	Membranous GN
<input type="radio"/>	Diffuse proliferative GN
<input type="radio"/>	Focal segmental glomerulosclerosis
<input type="radio"/>	Rapidly progressive GN
<input type="radio"/>	Membranoproliferative GN

Dashboard

Overall score: 0%

1 -

□ Question 27 of 144



A 32 year old man attended his GP feeling generally unwell with headaches and nasal congestion. These symptoms had been ongoing for 4 weeks and did not seem to be responding to over-the-counter decongestants and flu remedies. He also had recurrent nose bleeds and had coughed up fresh blood on two or three occasions. On further questioning he also had some night sweats. He had otherwise been well with no past medical history and took no regular medications.

His GP was concerned about his symptoms and took some blood tests:

Haemoglobin	97 g/L	Sodium	138 mmol/L
Platelets	$169 \times 10^9/\text{L}$	Potassium	5.8 mmol/L
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Dashboard

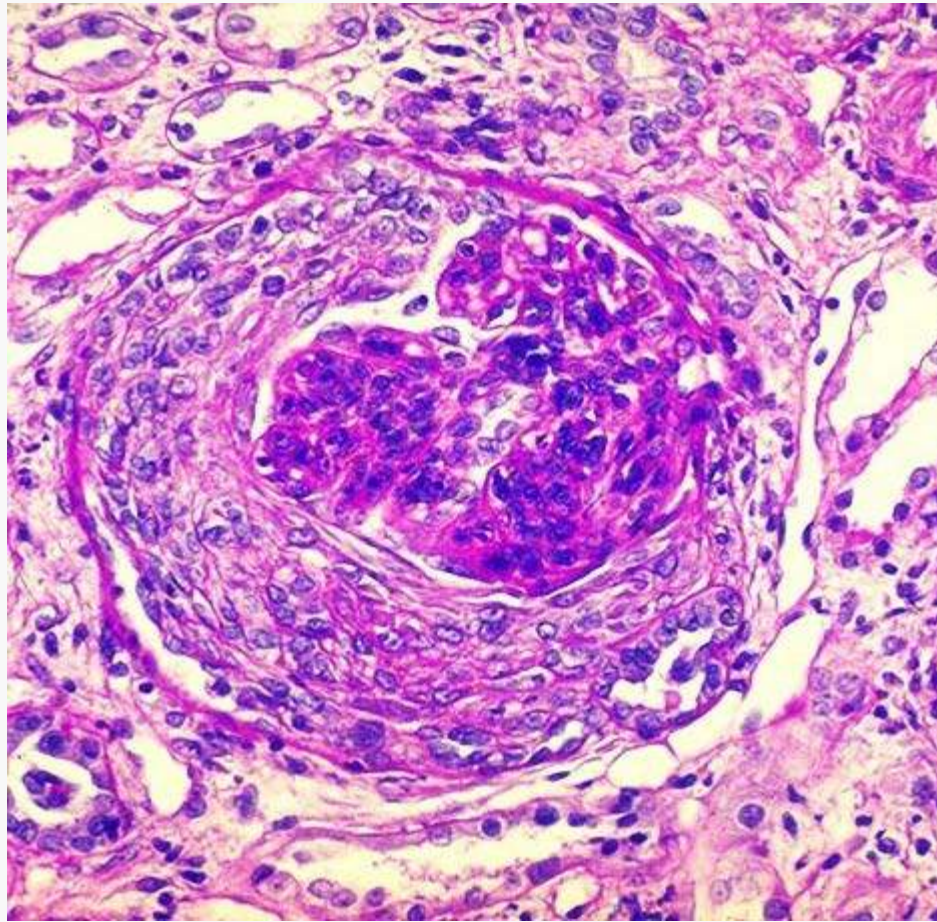
Overall score: **0%**
1 -

□ Question 27 of 144

A 32 year old man attended his GP feeling general malaise and weight loss, which have been ongoing for 4 weeks and did not seem to be related to any specific illness. He also had recurrent nose bleeds and had cough and sputum production. He also had some night sweats. He had otherwise no other symptoms.

His GP was concerned about his symptoms and ordered a blood test.

Haemoglobin	97 g/L	Sodium	135 mmol/L
Platelets	169 $\times 10^9/L$	Potassium	4.2 mmol/L
White cell count	10.0 $\times 10^9/L$	Urea	12 mmol/L
Neutrophils	5.5 $\times 10^9/L$	Creatinine	350 $\mu\text{mol/L}$
Eosinophils	0.3 $\times 10^9/L$	Albumin	32 g/L
ESR	19 mm/h	Bilirubin	8 micromol/L
CRP	24 mg/L	ALT	27 iu/L
Alkaline Phosphatase	35 iu/L		



On receiving these results the GP admitted the patient to hospital to investigate reasons for the raised creatinine. Additional tests showed:

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	Diffuse proliferative GN
	Focal segmental glomerulosclerosis
	Rapidly progressive GN
	Membranoproliferative GN

Dashboard

Overall score: **0%**
1 -

□ Question 27 of 144

□ □

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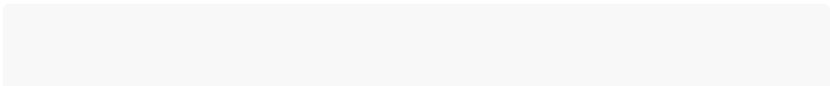
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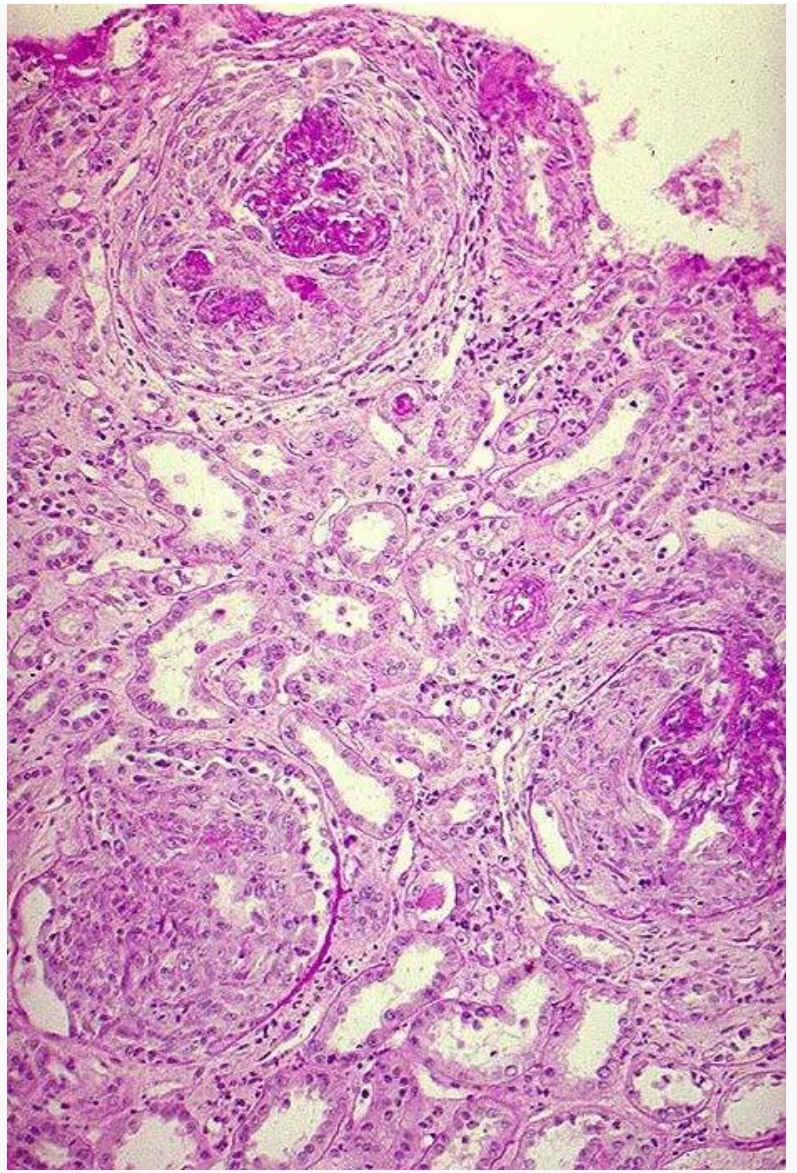
	Membranous GN
	Diffuse proliferative GN
	Focal segmental glomerulosclerosis

	Rapidly progressive GN
	Membranoproliferative GN

Dashboard

Overall score: **0%**
1 -





□ Question 28 of 144



A 64-year-old gentleman was seen in the renal patient clinic. He had a known history of polycystic kidneys and for the last nine months was undergoing haemodialysis. He complained of increasing shortness of breath on exertion over the last few weeks with a reduced appetite. He was assessed by his GP who undertook the following investigations:

Results (16 weeks ago):

Hb	96 g/l
Platelets	$242 \times 10^9/l$
WBC	$6.6 \times 10^9/l$
Ferritin	22 (NR 15-250 mcg/l)
B12	322 (NR 160-900 ng/l)
Folate	18 (NR 3-20 mcg/l)

Na ⁺	136 mmol/l
K ⁺	4.8 mmol/l
Urea	22.2 mmol/l
Creatinine	468 μ mol/l

Upper GI endoscopy: hiatus hernia seen

Lower GI endoscopy: NAD

He was subsequently commenced on ferrous sulphate 200mg TDS by his GP, but did not feel much better. His past medical history comprised diabetes mellitus, hypertension and hypercholesterolaemia for which he was prescribed aspirin 75mg OD, simvastatin 40mg ON, ramipril 5mg OD, amlodipine 5mg OD and gliclazide 80mg OD.

Examination revealed the presence of a pale gentleman with a blood pressure of 132/78 mmHg, heart rate 82 bpm and respiratory rate of 18/min. Examination of his cardiovascular and respiratory systems revealed the presence of a JVP

3cm and an absence of pedal oedema with good air entry in all zones. Examination of his abdomen revealed the presence of two ballotable masses in the renal angle but otherwise no masses and auscultation was unremarkable.

Investigations undertaken at the clinic revealed the following results:

Hb	101 g/l
Platelets	222 * 10 ⁹ /l
WBC	7.2 * 10 ⁹ /l
Ferritin	76 (NR 15-250 mcg/l)
Transferrin saturation	18%
B12	342 (NR 160-900 ng/l)
Folate	17 (NR 3-20 mcg/l)

Na ⁺	136 mmol/l
K ⁺	4.6 mmol/l
Urea	25.2 mmol/l
Creatinine	512 µmol/l
TSH	1.2 mu/l

What is the single next best management step?

	Continue oral iron therapy and recheck FBC, ferritin and transferrin saturation in four weeks
	Commence intravenous iron therapy
	Arrange referral to gastroenterology and haematology for further investigation
	Commence erythropoietin therapy
	Arrange packed red cell transfusion

Dashboard

Overall score: 0%

1 -

□ Question 28 of 144



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Dashboard

Overall score: 0%
1 -

Question 29 of 144



A 75 year-old man presented to his GP with bilateral lower limb swelling which had developed over the past week. He also described having frothy urine. He had a past history of lung cancer for which he was about to begin a course of palliative chemotherapy.

On examination, his pulse was 88 beats per minute and his blood pressure was 150/90 mmHg. Urinalysis showed protein 4+ and blood 1+.

Hb	110 g/l
Platelets	$375 \times 10^9/l$
WBC	$4.9 \times 10^9/l$

Na ⁺	136 mmol/l
K ⁺	4.6 mmol/l
Urea	23.0 mmol/l
Creatinine	420 μ mol/l
Serum Albumin	18 g/L
24 hour urine protein	4.5 g (<0.2)

What is the most likely diagnosis?

	Post-infectious glomerulonephritis
	Acute interstitial nephritis
	Focal segmental glomerulosclerosis

	Minimal change disease
	Membranous nephropathy

Dashboard

Overall score: **0%**

1 -

Question 29 of 144



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Serum Albumin	18 g/L
24 hour urine protein	4.5 g (<0.2)

What is the most likely diagnosis?

	Post-infectious glomerulonephritis
	Acute interstitial nephritis
	Focal segmental glomerulosclerosis

	Minimal change disease
	Membranous nephropathy

Dashboard

Overall score: **0%**
1 -

Question 29 of 144

A 75 year-old man presented to his GP with bilateral conjunctival haemorrhages. He also described having frothy urine. He had a past history of chronic liver disease and palliative chemotherapy.

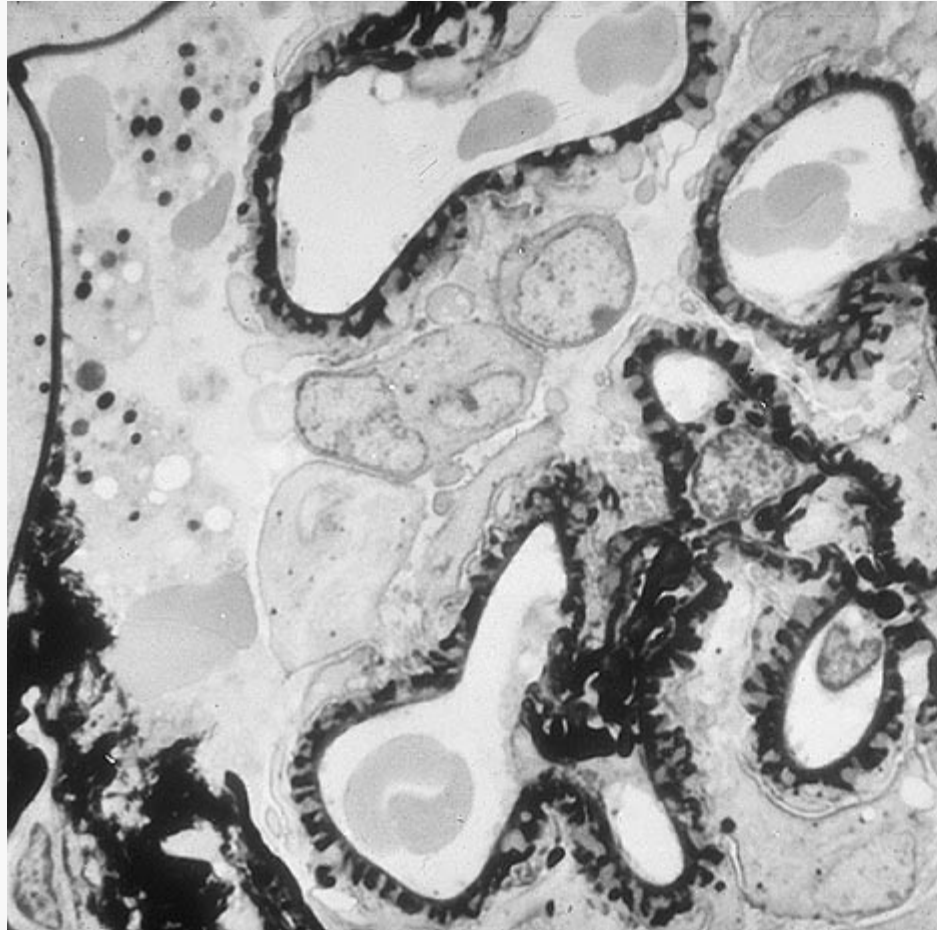
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What is the most likely diagnosis?

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<input type="radio"/>	Focal segmental glomerulosclerosis



	Minimal change disease
	Membranous nephropathy

Dashboard

Overall score: **0%**
1 -

□ Question 30 of 144



A 46-year-old male was admitted to the Emergency Department with a five-day history of feeling generally unwell. He was unable to identify the exact cause of the illness, except that he had a sore throat a couple of weeks ago which spontaneously resolved. Over the last few hours, he has had three episodes of frank haematuria. Since then he has rapidly deteriorated, with a reducing urine output. His past medical history included hypertension for which he was treated with ramipril 5mg OD. He recalled being under the care of the paediatric nephrology as a child for isolated proteinuria for which no cause was found. He also had cochlear implants fitted as a child for hearing impairment but was otherwise fit and well. Upon specific questioning, he admitted that his mother was also under the care of the nephrology team for sporadic haematuria for which no cause was found, and as far as he was aware of her renal function was normal. He smoked 20 cigarettes per day and consumed 15 units of alcohol per week.

On examination, he was unwell with a heart rate of 125/min, respiratory rate of 28/min and blood pressure 96/74 mmHg. Examination of the cardiovascular system revealed a reduced JVP and skin turgor, and the presence of bilateral pedal oedema. Examination of his respiratory rate revealed tachypnoea but was otherwise unremarkable, with an oxygen saturation of 97% on air. Examination of his gastrointestinal system was unremarkable, as was the examination of his neurological system.

Initial investigations revealed the following:

Na ⁺	129 mmol/l
K ⁺	6.8 mmol/l
Urea	22.1 mmol/l
Creatinine	465 µmol/l

Bilirubin	11 µmol/l
ALP	101 u/l
ALT	22 u/l
Albumin	30 g/l

Urinalysis: blood +++++, protein +++++, leuc/nit negative gluc negative

ECG: HR 126bpm normal sinus tachycardia, tented T waves, QRS interval 132ms
Chest x-ray: unremarkable

The urea and electrolytes 6 months ago were as follows:

Na ⁺	132 mmol/l
K ⁺	5.3 mmol/l
Urea	11.2 mmol/l
Creatinine	138 µmol/l

What is the most likely diagnosis?

	Post streptococcal glomerulonephritis
	Autosomal dominant polycystic kidneys
	Goodpasture's syndrome
	Alport's syndrome
	Granulomatosis with polyangiitis

Dashboard

Overall score: 0%

1 -

□ Question 30 of 144



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Dashboard

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1 -

□ Question 31 of 144



A 25 year old man was admitted under section to an inpatient psychiatric hospital after a severe manic episode. The patient had suffered several previous episodes of depression but had not previously been admitted to hospital for a mental health problem. Treatment for bipolar affective disorder with lithium, lorazepam and olanzapine had been initiated.

Shortly after admission, routine blood tests showed the patient to be hyponatraemic and he was noted to be passing large volumes of urine by ward staff. Following advice from the endocrine team, basic investigations were requested as detailed below.

Sodium	129 mmol / L
Potassium	3.7 mmol / L
Urea	1.8 mmol / L
Creatinine	55 micromol / L
Calcium (adjusted)	2.41 mmol / L (reference 2.20-2.60)
Serum glucose (random)	5.4 mmol / L
Thyroid stimulating hormone	0.8 microU / L (reference 0.4-5.0)
T4 free serum	12.5 pmol / L (reference 8.5-15.2)
Plasma osmolality	265 mmol / L (reference 280-295)
Urine osmolality	80 mmol / L (reference 100-900)
Serum Lithium	0.35 mEq / L (reference 0.8-1.2)

Urine dipstick: negative glucose; negative protein; negative nitrites; negative leucocytes; negative ketones

What is the most likely cause of the patient's polydipsia?

Nephrogenic diabetes insipidus secondary to lithium therapy

	Syndrome of inappropriate anti-diuretic hormone secretion secondary to olanzapine
	Idiopathic cranial diabetes insipidus
	Primary polydipsia
	Excessive alcohol consumption

Dashboard

Overall score: 0%

1 -

□ Question 31 of 144



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Dashboard

Overall score: **0%**
1 -

Question 32 of 144

□ □

A 66-year-old gentleman presents to the emergency department with a fractured humerus following direct trauma. During routine blood tests, it is found that he has stage II chronic renal impairment when compared to previous blood tests. Urinary albumin is found to be within normal range. He has a background of previous ischaemic heart disease and hypertension. His blood pressure ramipril is increased to maximum dose and he is referred to smoking cessation clinic. He is keen to control his blood pressure.

Blood tests:

	01/11/2016	08/09/2016
Na ⁺	144 mmol/l	139 mmol/l
K ⁺	4.8 mmol/l	4.7 mmol/l
Urea	5.2 mmol/l	5.0 mmol/l
Creatinine	112 µmol/l	104 µmol/l

On future review, what should his target blood pressure be in clinic?

	Less than 130/80mmHg
	Less than 135/80mmHg
	Less than 135/85mmHg
	Less than 140/85mmHg
	Less than 140/90mmHg

Dashboard

Overall score: 0%

Question 32 of 144

□ □

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	Less than 135/85mmHg
	Less than 140/85mmHg
	Less than 140/90mmHg

Dashboard

Overall score: 0%

□ Question 33 of 144



A 21-year-old female presents with a vague two month history of lethargy, muscle pain and weight loss. Examination is unremarkable. Observations included heart rate 72/min, respiratory rate 14/min, oxygen saturations are 99% on air, blood pressure of 110/80mmHg. She was afebrile.

Routine bloods are sent.

Hb	150 g/l	Na ⁺	128 mmol/l
Platelets	200 * 10 ⁹ /l	K ⁺	2.9 mmol/l
WBC	12.0 * 10 ⁹ /l	Urea	7.0 mmol/l
Neuts	8.0 * 10 ⁹ /l	Creatinine	85 µmol/l
Lymphs	4.0 * 10 ⁹ /l	CRP	11 mg/l

What is the next most appropriate investigation?

	Computed tomography (CT) of the thorax
	Ultrasound of the renal tract
	Serum aldosterone
	Urinary electrolytes
	Short synacthen test

Dashboard

Overall score: 0%

1 -

□ Question 33 of 144



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Dashboard

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1 -

□ Question 34 of 144

□ □

A 65-year-old woman with end-stage renal failure (ESRF) presents to the renal department with a 2-hour history of severe abdominal pain, vomiting and fever. She was started on peritoneal dialysis 3 months ago which has so far been uneventful. On examination she has a tender and rigid abdomen; bowel sounds are absent. She is pyrexial at 39.5°C and the dialysate drained from her abdomen is cloudy. The peritoneal catheter entry site is clean, dry and non-erythematous.

Investigations:

Peritoneal fluid sample microscopy & culture	Pending
--	---------

What is the most appropriate management?

	Intravenous cefotaxime and metronidazole
	Intravenous piperacillin & tazobactam (tazocin) and gentamicin
	Intravenous flucloxacillin and gentamicin
	Intravenous gentamicin and oral vancomycin
	Intraperitoneal gentamicin and vancomycin

Dashboard

Overall score: 0%

1 -

Question 34 of 144

□ □

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	Intravenous flucloxacillin and gentamicin
	Intravenous gentamicin and oral vancomycin
	Intraperitoneal gentamicin and vancomycin

Dashboard

Overall score: **0%**

1 -

□ Question 35 of 144



You are called to see a 45-year-old male on the renal ward because the nurses are concerned. The gentleman was admitted 2 weeks earlier with acute renal failure. Blood tests revealed a positive anti-neutrophil cytoplasmic antibody (ANCA) with a myeloperoxidase (MPO) level of 131. He underwent renal biopsy 4 days after admission and the provisional pathology report has shown acute crescentic glomerulonephritis (immuno-fluorescence awaited). Five days into admission he developed frank haemoptysis. He was treated with high flow oxygen and did not require transfusion.

You have been asked to see him because he collapsed on the way back from the bathroom. His blood pressure is 85/40 mmHg and he is tachycardic. He looks pale. He denies any further haemoptysis but complains of generalised abdominal pain. Blood results reveal:

White cell count	12.6 *10 ⁹ /l
Haemoglobin	67 g/l
Platelets	129 *10 ⁹ /l
Adjusted calcium	2.01 mmol/l
Prothrombin time	14 seconds
Fibrinogen	1.1 g/dL

An urgent CT angiogram is arranged which confirms intra-abdominal bleeding at the site of his kidney biopsy.

Which treatment is most likely to have increased his risk of delayed post-biopsy bleed?

	Aspirin
	Plasma exchange
	Simvastatin
	Intravenous methylprednisolone

Dashboard

Overall score: 0%

1 -

□ Question 35 of 144



You are called to see a 45-year-old male on the renal ward because the nurses are concerned. The gentleman was admitted 2 weeks earlier with acute renal failure. Blood tests revealed a positive anti-neutrophil cytoplasmic antibody (ANCA) with a myeloperoxidase (MPO) level of 131. He underwent renal biopsy 4 days after admission and the provisional pathology report has shown acute crescentic glomerulonephritis (immuno-fluorescence awaited). Five days into admission he developed frank haemoptysis. He was treated with high flow oxygen and did not require transfusion.

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	Aspirin
	Plasma exchange
	Simvastatin
	Intravenous methylprednisolone

Dashboard

Overall score: **0%**

1 -

□ Question 36 of 144



A 24-year-old female with a history of sickle cell trait presents to the outpatient department with the results of her routine urine examination which was performed after she complained of an intermittent burning sensation just after passing urine. She works as a fitness instructor at a nearby gym and has said that she takes ibuprofen regularly for recurrent muscle spasms due to exercise. She has no known drug allergies but mentions that she does develop itchy skin and rhinitis when the season changes.

On examination, her blood pressure is 145/95 mmHg and there is mild periorbital puffiness. Her liver is palpable 1 finger breadth below the right costal margin with a total span of 11cms.

Lab results revealed:

Hb	80 g/l
MCV	62 fl
MCH	20 pg
WBC	$9 \times 10^9/l$
Plt	$350 \times 10^9/l$
Urea	8.1 mmol/l
Creatinine	275 μ mol/l
Na+	140 mmol/l
K+	4.1 mmol/l
Albumin	30 g/l

Urine routine examination showed proteinuria 2+

Renal biopsy showed uniform granular capillary wall deposits of IgG and C3 complement.

What is the most appropriate management plan?

	Oral high dose corticosteroids with azathioprine
	Blood pressure control with ACE inhibitors and immunosuppression with chlorambucil/oral prednisolone
	Blood pressure control with ACE inhibitors and plasmapheresis
	Simple observation and regular monitoring of renal functions
	Haemofiltration

Dashboard

Overall score: **0%**

1 -

□ Question 36 of 144



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	Blood pressure control with ACE inhibitors and plasmapheresis
	Simple observation and regular monitoring of renal functions
	Haemofiltration

Dashboard

Overall score: **0%**

1 -

□ Question 36 of 144

A 24-year-old female with a history of sickle cell disease presents with a recent urine examination which was performed after she experienced muscle spasms due to exercise. She has no known allergies and no rhinitis when the season changes.

On examination, her blood pressure is 145/95 mmHg. A physical examination reveals a total of 1000 mL of urine.

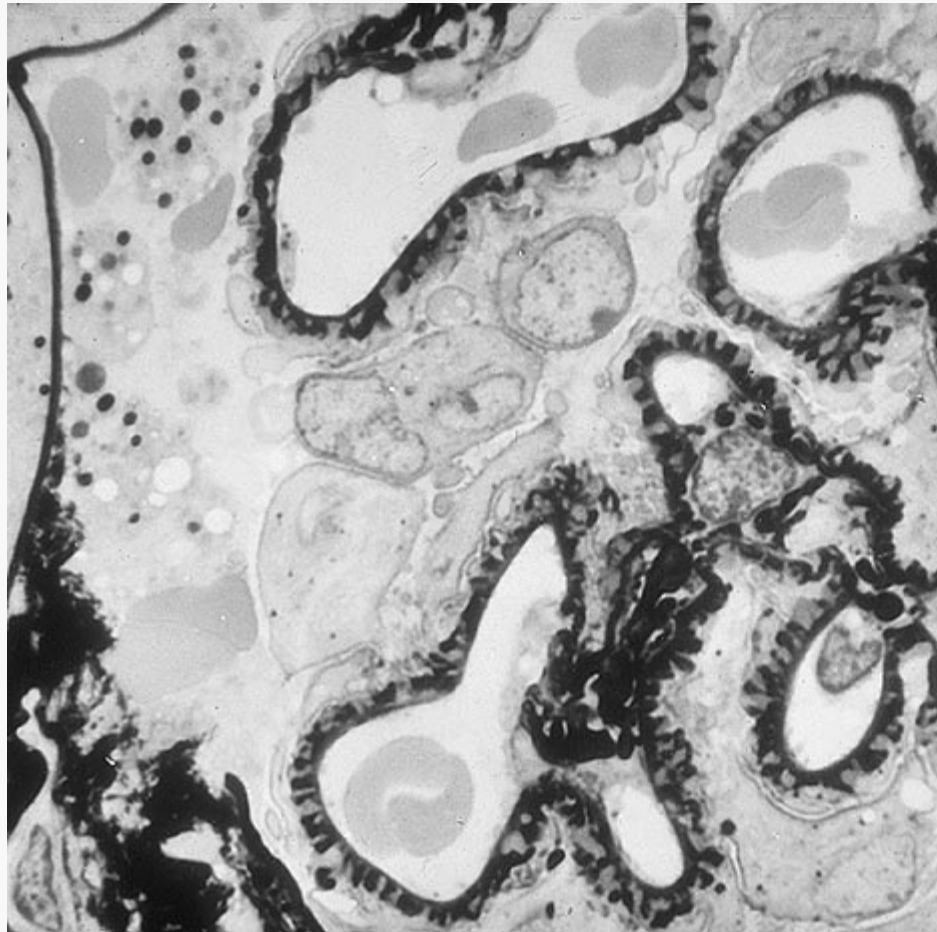
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	Simple observation and regular monitoring of renal functions
	Haemofiltration

Dashboard

Overall score: **0%**
1 -

□ Question 37 of 144

□ □

A 70-year-old woman is reviewed in the chronic kidney disease clinic. She also has a history of hypertension for which she takes amlodipine 5mg od and ramipril 10mg od. Her most recent results are as follows:

Blood pressure today is 128/74 mmHg.

	Recent	12 months ago
Na ⁺	140 mmol/l	141 mmol/l
K ⁺	4.5 mmol/l	4.3 mmol/l
Urea	11.2 mmol/l	10.5 mmol/l
Creatinine	124 µmol/l	114 µmol/l
eGFR	39 ml/min	43 ml/min

What is the most appropriate next step in management?

	Start atorvastatin 20mg on
	Reduce ramipril to 5mg od and recheck U&Es in 4 weeks
	Start simvastatin 40mg on
	Increase amlodipine to 10mg od
	Check her QRISK2 score

Dashboard

Overall score: 0%

Question 37 of 144

A 70-year-old woman is reviewed in the chronic kidney disease clinic. She also has a history of hypertension for which she takes amlodipine 5mg od and ramipril 10mg od. Her most recent results are as follows:

Blood pressure today is 128/74 mmHg.

	Recent	12 months ago
Na ⁺	140 mmol/l	141 mmol/l
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Urea	11.2 mmol/l	10.5 mmol/l
Creatinine	124 µmol/l	114 µmol/l
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What is the most appropriate next step in management?

	Start atorvastatin 20mg on
	Reduce ramipril to 5mg od and recheck U&Es in 4 weeks
	Start simvastatin 40mg on
	Increase amlodipine to 10mg od
	Check her QRISK2 score

Dashboard

Overall score: 0%

Question 37 of 144

A 70-year-old woman is reviewed today as she takes amlodipine 5mg once daily.

Blood pressure today is 128/82 mmHg.

	Recent	
Na ⁺	140 mmol/l	
K ⁺	4.5 mmol/l	
Urea	11.2 mmol/l	
Creatinine	124 µmol/l	
eGFR	39 ml/min	43 ml/min

Primary prevention

(10-year cardiovascular risk $\geq 10\%$ OR
most type 1 diabetics OR
CKD if eGFR $< 60\text{ml/min/m}^2$)

Atorvastatin 20mg od

(if non-HDL has not fallen by $\geq 40\%$ then
consider titrating up to 80mg)

What is the most appropriate next step in management?

	Start atorvastatin 20mg on
	Reduce ramipril to 5mg od and recheck U&Es in 4 weeks
	Start simvastatin 40mg on
	Increase amlodipine to 10mg od
	Check her QRISK2 score

Dashboard

Overall score: **0%**

□ Question 38 of 144



An 84 year-old lady is referred to the Renal team. She was admitted 3 days previously with a community-acquired pneumonia and was being treated with co-amoxiclav and doxycycline. Over the past 24 hours she has developed a rash and reduced urine output. She was otherwise fit and well apart from mild asthma which was well controlled with a salbutamol inhaler.

On examination, her pulse was 105 beats per minute and her blood pressure was 112/64 mmHg. Urinalysis showed protein 2+ and blood 2+.

Hb	122 g/l
Platelets	$468 \times 10^9/l$
WBC	$8.3 \times 10^9/l$
Eosinophils	$2.1 \times 10^9/l$

Na ⁺	133 mmol/l
K ⁺	5.4 mmol/l
Urea	18.5 mmol/l
Creatinine	440 μ mol/l

What is the most likely diagnosis?

	Focal segmental glomerulosclerosis
	Post-infectious glomerulonephritis
	Membranous nephropathy

	Minimal change disease
	Acute interstitial nephritis

Dashboard

Overall score: **0%**

1 -

Question 38 of 144



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	Post-infectious glomerulonephritis
	Membranous nephropathy

	Minimal change disease
	Acute interstitial nephritis

Dashboard

Overall score: **0%**
1 -

□ Question 39 of 144



A 60-year-old woman is seen in an outpatient renal clinic. She has hypertension and has had type 1 diabetes mellitus since the age of 20. She has an eGFR of 15mls/min/1.73m², it is expected that she will need to commence renal replacement therapy in the next year.

She takes the following medications: Atorvastatin 40 mg nocte, ramipril 2.5mg daily, amlodipine 5mg daily, ferrous sulphate 200mg daily and a basal bolus regimen of insulin. She had previously been taking alfacalcidol and calcium acetate but they had been recently stopped.

On examination, she has some pitting ankle oedema up to her mid-tibia, a few bibasal crepitations on examination of her chest and appears comfortable at rest. There are no signs of uraemia.

Investigation results:

Sodium	140 mmol/L
Potassium	5.0 mmol/L
Serum corrected calcium	2.59 mmol/L
Serum phosphate	1.9 mmol/L
Plasma parathyroid hormone concentration	4pmol/L (0.9-5.4)

What would be the most appropriate step to correct the phosphate concentration?

	Start renal replacement therapy now
	Calcium carbonate
	No action needs to be taken
	Sevelamer
	Alendronic acid

Dashboard

Overall score: **0%**

1 -

□ Question 39 of 144



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	Calcium carbonate
	No action needs to be taken
	Sevelamer
	Alendronic acid

Dashboard

Overall score: **0%**

1 -

□ Question 40 of 144

□ □

A 74-year-old male is reviewed in the renal outpatient clinic. Over the past 4 years, his renal function has slowly deteriorated, with his creatinine rising to 482 $\mu\text{mol/l}$ and estimated glomerular filtration rate at 7 ml/min. He has noted the amount of urine he passes to be deteriorating over the past 3 months. His past medical history includes hypertension, type 2 diabetes mellitus, duodenal ulcer 35 years ago requiring laparotomy and an incisional hernia that has not been repaired. You discuss renal replacement therapies with him. He is very keen for the least lifestyle-restricting option if at all possible but understands that 'his health comes first'. A recent ultrasound of his renal tract demonstrates bilateral atrophic kidneys with extensive bilateral iliac vessel calcification. What is the most appropriate next treatment?

	Annual follow up
	Haemodialysis
	Peritoneal dialysis
	Renal transplant
	Palliation

Dashboard

Overall score: 0%

1 -

□ Question 40 of 144

□ □

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	Annual follow up
	Haemodialysis
	Peritoneal dialysis
	Renal transplant
	Palliation

Dashboard

Overall score: **0%****1** -

Question 41 of 144



A 50-year-old lady presents to the emergency department with transient left sided facial droop and arm weakness lasting 30 minutes with expressive dysphasia which has resolved by the time she arrives in the department. She is referred to the medical team because she has a fever of 38.2 degrees Celsius and has been otherwise generally unwell for the last few days. She is seen by the stroke nurse who arranges for her to have a CT head which is reported as normal. Her blood results are as follows;

Hb	82 g/l
Platelets	$12 \times 10^9/l$
WBC	$5.0 \times 10^9/l$
Neutrophils	$3.0 \times 10^9/l$
Blood film	multiple red cells fragments

Na ⁺	138 mmol/l
K ⁺	4.8 mmol/l
Urea	8.0 mmol/l
Creatinine	180 μ mol/l

Bilirubin	78 μ mol/l
ALP	78 u/l
ALT	40 u/l
Albumin	38 g/l

She is transferred to the acute medical unit. Whilst on the ward awaiting a haematology review for her low platelets and anaemia she suffers another TIA. Given the likely cause of her symptoms, what is the most appropriate treatment?

	Aspirin
	Methylprednisolone and plasma exchange
	Thrombolysis
	High dose cyclophosphamide
	Haemodialysis

Dashboard

Overall score: **0%**

1 -

Question 41 of 144



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	Methylprednisolone and plasma exchange
	Thrombolysis
	High dose cyclophosphamide
	Haemodialysis

Dashboard

Overall score: **0%**
1 -

□ Question 42 of 144



A 74 year old lady with a background of type 2 diabetes mellitus, hypertension and previous myocardial infarction presents to the Emergency Department with a 2 day history of abdominal pain and profuse diarrhoea which has become bloody in the last 24 hours. Her temperature is 37.2°, heart rate 102 beats per minute and blood pressure 106/74 mmHg. On examination her heart sounds are normal, chest is clear and she has a diffusely tender abdomen.

Hb	10.4 g/dl
Platelets	64 * 10 ⁹ /l
WBC	14.2 * 10 ⁹ /l
Urea	10 mmol/l
Creatinine	154 µmol/l
Bilirubin	56 µmol/l
CRP	125 mg/l

A blood film shows fragmented red blood cells. Given the most likely diagnosis, what is the most appropriate management for this patient?

	Loperamide and IV metronidazole
	Supportive management and notify a consultant in communicable disease control
	Urgent plasma exchange
	Platelet transfusion
	Loperamide and PO ciprofloxacin

Overall score: **0%**

1 -

□ Question 42 of 144



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Urea	10 mmol/l
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	Urgent plasma exchange
	Platelet transfusion
	Loperamide and PO ciprofloxacin

Overall score: **0%**

1 -

□ Question 43 of 144

□ □

A 52-year-old gentleman complains of severe abdominal pain. He has a background of stage III chronic kidney disease, aspergillosis, type two diabetes mellitus and peripheral vascular disease. Following review by the surgical team, a contrast CT scan is booked. He takes aspirin, clopidogrel, metformin, paracetamol, amphotericin B and insulin. His capillary blood glucose is 8.2mmol/L. He is given IV 0.9% saline and is prescribed to have this before and following contrast. His metformin is also stopped.

Blood tests:

Na ⁺	139 mmol/l
K ⁺	4.1 mmol/l
Urea	5.2 mmol/l
Creatinine	145 µmol/l

Which additional measure is most likely to be effective in preventing contrast-induced acute kidney injury?

	Start insulin sliding scale
	Stop paracetamol
	Give contrast intra-arterially
	Stop amphotericin
	Stop aspirin

Dashboard

Overall score: 0%

□ Question 43 of 144

□ □

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	Start insulin sliding scale
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	Stop amphotericin
	Stop aspirin

Dashboard

Overall score: **0%**

Question 44 of 144

A 42-year-old woman with a history of systemic lupus erythematosus comes to the clinic for review. She has been managed over the past few months for class III lupus nephritis with steroids and cyclophosphamide. Her creatinine has stabilised and has remained at 165 $\mu\text{mol/l}$ over the past 2 months. Which of the following is the most appropriate long-term steroid sparing agent with respect to maintaining renal function?

	Mycophenolate mofetil
	Methotrexate
	Azathioprine
	Hydroxychloroquine
	Sulphasalazine

Dashboard

Overall score: 0%

1 -

Question 44 of 144

□ □

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Dashboard

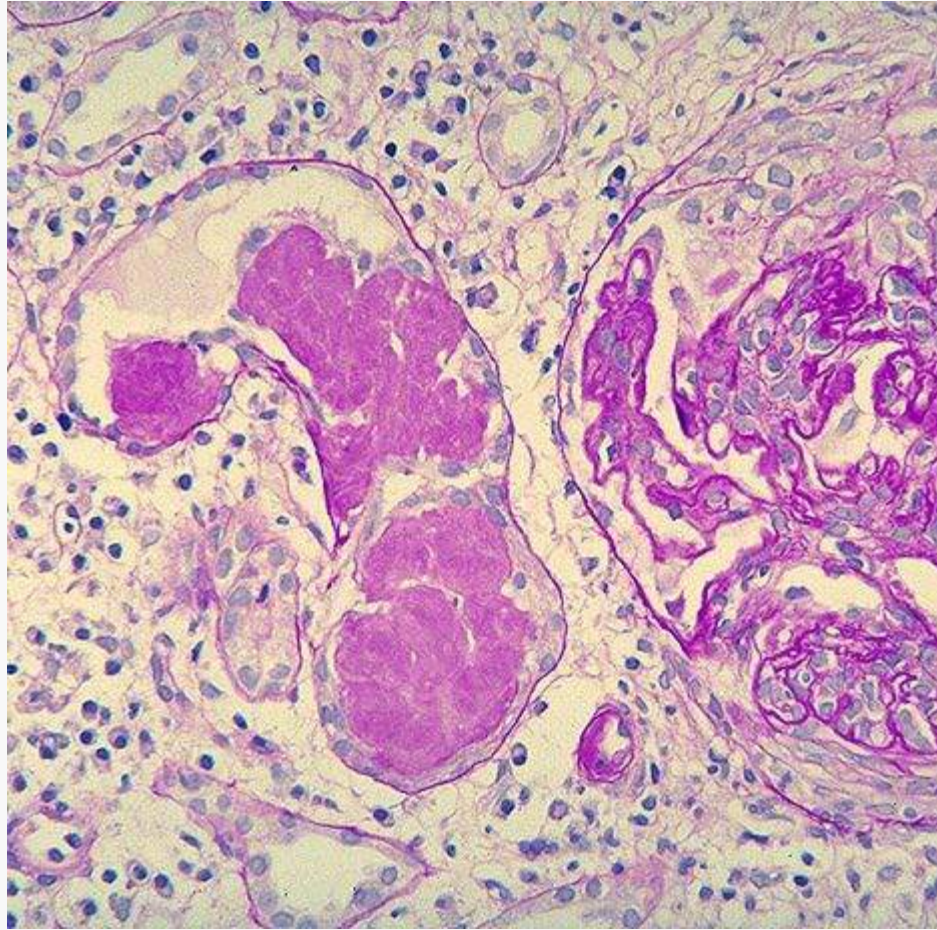
Overall score: **0%**

1 -

□ Question 44 of 144

A 42-year-old woman with a history of systemic managed over the past few months for class III stabilised and has remained at 165 $\mu\text{mol/l}$ over term steroid sparing agent with respect to main

	Mycophenolate mofetil
	Methotrexate
	Azathioprine
	Hydroxychloroquine
	Sulphasalazine



Dashboard

Overall score: 0%

1 -

□ Question 45 of 144



A 65-year-old man attends renal transplant clinic as part of the preliminary workup to be considered as a living kidney donor. The patient's 26-year-old daughter has stage 5 chronic kidney disease secondary to congenital hydronephrosis, and will shortly require dialysis unless she receives a donated kidney. Upon arrival at the appointment, the patient states that he is very hopeful that he will be found to be a suitable kidney donor for his daughter.

The patient reports that he is in good general health, with his only active health problem being high blood pressure diagnosed 4 years previously, and for which he is prescribed medications. The patient denies any history of cardiovascular disease, malignancy, chronic infection, nephrolithiasis or kidney disease. There is no history of the patient suffering from any substance misuse or mental health problems.

The patient's regular medications were ramipril 5 mg once daily, amlodipine 10 mg once daily and bendroflumethiazide 2.5 mg daily. He stated that he had no known drug allergies and had never had an adverse reactive to anaesthetic medications. The patient is a lifelong non-smoker.

Examination revealed a moderately overweight but otherwise generally healthy middle-aged man. Cardiovascular, respiratory and abdominal examinations were unremarkable.

Initial investigations undertaken prior to the clinic, together with some details of the proposed recipient of the patient's kidney, are given below.

Body mass index	31.2 kg / m ²
Haemoglobin	160 g / dL
Mean cell volume	89.8 fl
White cell count	7.3 x 10 ⁹ / microlitre
Neutrophils	4.7 x 10 ⁹ / microlitre (reference 1.8-7.8)
Platelets	387 x 10 ⁹ / microlitre
Urea	6.4 mmol / L
Creatinine	103 micromol / L
eGFR	79 ml / min / 1.73 m ²

Sodium	140 mmol / L
Potassium	3.9 mmol / L
Albumin	46 g / L (reference 35-50)
Bilirubin	24 micromol / L (reference < 26)
Urinalysis	no abnormality detected
Urine microscopy	no abnormality detected
Albumin-creatinine ratio	2.8 mg / mmol (reference < 3)
Ambulatory blood pressure monitoring average	158 / 92 mmHg

Potential donor blood type	Potential recipient blood type
Rhesus-D negative	Rhesus-D positive
ABO group A	ABO group AB

What is the absolute contraindication to this patient acting as a living kidney donor to his daughter?

	Uncontrolled hypertension
	Age > 60 years
	Blood type incompatibility
	Impaired renal function
	Obesity

Dashboard
Overall score: 0%
1 -

□ Question 45 of 144

□ □

A 65-year-old man attends renal transplant clinic as part of the preliminary workup to be considered as a living kidney donor. The patient's 26-year-old daughter has stage 5 chronic kidney disease secondary to congenital hydronephrosis, and will shortly require dialysis unless she receives a donated kidney. Upon arrival at the appointment, the patient states that he is very hopeful that he will be found to be a suitable kidney donor for his daughter.

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Ambulatory blood pressure monitoring average	158 / 92 mmHg

Potential donor blood type	Potential recipient blood type
Rhesus-D negative	Rhesus-D positive
ABO group A	ABO group AB

What is the absolute contraindication to this patient acting as a living kidney donor to his daughter?

	Uncontrolled hypertension
	Age > 60 years
	Blood type incompatibility
	Impaired renal function
	Obesity

Dashboard
Overall score: 0% 1 -

Question 46 of 144

□ □

A 71-year-old patient with end-stage renal failure secondary to adult polycystic kidney disease presents with new painful necrotic skin lesions. Her general practitioner has referred her to hospital as they have failed to improve with oral antibiotics.

On arrival she is afebrile. A bruit and thrill were noted over a left brachiocephalic fistula. She has an irregular 8cm x 4 cm, punched-out ulcer on the medial aspect of her left calf just below her knee. The centre of the ulcer is black and necrotic. There is minimal surrounding erythema.

Bloods results revealed:

White cell count	10.0 * 10 ⁹ /l
C-reactive protein (CRP)	17 mg/dL

Which investigation will confirm the diagnosis?

	Skin swab
	Parathyroid hormone (PTH)
	Skin biopsy
	Anti-neutrophil cytoplasmic antibody (ANCA)
	Computer tomography angiogram of left leg

Dashboard

Overall score: 0%

1 -

Question 46 of 144

□ □

A 71-year-old patient with end-stage renal failure secondary to adult polycystic kidney disease presents with new painful necrotic skin lesions. Her general practitioner has referred her to hospital as they have failed to improve with oral antibiotics.

On arrival she is afebrile. A bruit and thrill were noted over a left brachiocephalic fistula. She has an irregular 8cm x 4 cm, punched-out ulcer on the medial aspect of her left calf just below her knee. The centre of the ulcer is black and necrotic. There is minimal surrounding erythema.

Bloods results revealed:

White cell count	10.0 * 10 ⁹ /l
C-reactive protein (CRP)	17 mg/dL

Which investigation will confirm the diagnosis?

	Skin swab
	Parathyroid hormone (PTH)
	Skin biopsy
	Anti-neutrophil cytoplasmic antibody (ANCA)
	Computer tomography angiogram of left leg

Dashboard

Overall score: **0%**

1 -

□ Question 47 of 144

□ □

A 17 year old female patient presents to the acute medical unit with a seizure. She has no past medical history of note. On assessment, she is post-ictal but maintaining airway, breathing, circulation independently. Her capillary blood glucose is 5.4.

CT brain reveals no bleed, no infarct and no space occupying lesion.
ECG: normal sinus rhythm

Bloods are as follows:

Hb	130 g/dl
Plt	$60 \times 10^9/l$
WCC	$14.5 \times 10^9/l$
Na+	133 mmol/l
K+	5.5 mmol/l
Ur	39 mmol/l
Cr	1001 $\mu\text{mol/l}$

Blood gas analysis:

pH	7.34
pCO ₂	4.0 kPa
pO ₂	13.0 kPa
BE	-4 mmol/l
HCO ₃ ⁻	16 mEq/l

You note her renal function and arrange for further investigation by booking a renal ultrasound and performing

immunology bloods to assess for the underlying cause. You catheterise the patient - urine dipstick shows PRO +++, BLD ++. Therefore, a mid-stream sample of urine is sent for microscopy, culture and sensitivity(results awaited). Following discussion with the renal team, the decision is made to dialyse the patient.

Which of the following is an indication for dialysis?

	Creatinine >1000 µmol/l
	pH 7.34
	Potassium >= 5.5 mmol/l
	Urea > 25 mmol/l
	Seizure

Dashboard

Overall score: 0%

1 -

□ Question 47 of 144

□ □

A 17 year old female patient presents to the acute medical unit with a seizure. She has no past medical history of note. On assessment, she is post-ictal but maintaining airway, breathing, circulation independently. Her capillary blood glucose is 5.4.

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ECG: normal sinus rhythm

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Blood gas analysis:

pH	7.34
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BE	-4 mmol/l
HCO ₃ ⁻	16 mEq/l

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immunology bloods to assess for the underlying cause. You catheterise the patient - urine dipstick shows PRO +++, BLD ++. Therefore, a mid-stream sample of urine is sent for microscopy, culture and sensitivity(results awaited). Following discussion with the renal team, the decision is made to dialyse the patient.

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	Creatinine >1000 µmol/l
	pH 7.34
	Potassium >= 5.5 mmol/l
	Urea > 25 mmol/l
	Seizure

Dashboard

Overall score: **0%**
1 -

□ Question 48 of 144



An 18-year-old male presented to the Emergency Department complaining of blood in his urine for the last day. He described it initially as few drops of dark blood at the end of micturition but has gradually worsened such that at the time of admission he was passing large amounts of cola coloured urine. He also complained of swollen ankles and puffy eyes developing over the last few hours and had been feeling increasing lethargic and unwell over the last two days. When questioned specifically he denied the presence of shortness of breath, chest pain, haemoptysis, previous haematuria or change in urine volume and had otherwise been well in himself. He had no previous renal problems, though he recalled that his brother had been prescribed a course of steroids when he was aged nine years old for leaky kidneys. Other than a one week course of phenoxymethylpenicillin 500mg QDS prescribed by his GP two weeks ago for tonsillitis and a one week course of amoxicillin 500mg TDS prescribed 6 months ago for acute sinusitis he had no drug history and no past medical history of note.

Examination revealed the presence of a young athletic male with a blood pressure of 162/84 mmHg, heart rate of 96bpm, respiratory rate of 18/min, oxygen saturations of 95% on air and temperature of 37.1 Celsius. Examination of the cardiovascular system revealed the presence of normal heart sounds, a JVP of 3cm and the presence of bilateral pitting oedema of his ankles. Examination of his respiratory system was unremarkable with no signs of respiratory distress. Examination of his gastrointestinal system was unremarkable. Examination of his face revealed the presence of bilateral periorbital oedema; examination of his ENT and neurological systems were both unremarkable.

Initial investigation revealed the following results:

Hb	132 g/l
Platelets	428* 10 ⁹ /l
WBC	14.2 * 10 ⁹ /l
ESR	26 mm/hr

Na ⁺	138 mmol/l
K ⁺	5.2 mmol/l
Urea	6.4 mmol/l
Creatinine	77 µmol/l
CRP	18 mg/l

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Bilirubin	18 µmol/l
ALP	82 u/l
ALT	21 u/l
Protein	78 g/l
Albumin	39 g/l

Chest x-ray: normal appearance of heart and lung fields

ECG: sinus tachycardia 108bpm

Urinalysis: blood +++++ protein +++++, ketones +, negative all other parameters

Urine MCS: awaiting result

Blood MCS: awaiting result

What is the most likely diagnosis?

	Rapidly progressive glomerulonephritis
	Berger's nephropathy
	Granulomatosis with polyangiitis
	Post streptococcal glomerulonephritis
	Membranous nephropathy

Dashboard

Overall score: 0%

1 -

□ Question 48 of 144



An 18-year-old male presented to the Emergency Department complaining of blood in his urine for the last day. He described it initially as few drops of dark blood at the end of micturition but has gradually worsened such that at the time of admission he was passing large amounts of cola coloured urine. He also complained of swollen ankles and puffy eyes developing over the last few hours and had been feeling increasing lethargic and unwell over the last two days. When questioned specifically he denied the presence of shortness of breath, chest pain, haemoptysis, previous haematuria or change in urine volume and had otherwise been well in himself. He had no previous renal problems, though he recalled that his brother had been prescribed a course of steroids when he was aged nine years old for leaky kidneys. Other than a one week course of phenoxymethylpenicillin 500mg QDS prescribed by his GP two weeks ago for tonsillitis and a one week course of amoxicillin 500mg TDS prescribed 6 months ago for acute sinusitis he had no drug history and no past medical history of note.

Examination revealed the presence of a young athletic male with a blood pressure of 162/84 mmHg, heart rate of 96bpm, respiratory rate of 18/min, oxygen saturations of 95% on air and temperature of 37.1 Celsius. Examination of the cardiovascular system revealed the presence of normal heart sounds, a JVP of 3cm and the presence of bilateral pitting oedema of his ankles. Examination of his respiratory system was unremarkable with no signs of respiratory distress. Examination of his gastrointestinal system was unremarkable. Examination of his face revealed the presence of bilateral periorbital oedema; examination of his ENT and neurological systems were both unremarkable.

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Platelets	428* 10 ⁹ /l
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Bilirubin	18 µmol/l
ALP	82 u/l
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Protein	78 g/l
Albumin	39 g/l

Chest x-ray: normal appearance of heart and lung fields

ECG: sinus tachycardia 108bpm

Urinalysis: blood +++++ protein +++++, ketones +, negative all other parameters

Urine MCS: awaiting result

Blood MCS: awaiting result

What is the most likely diagnosis?

	Rapidly progressive glomerulonephritis
	Berger's nephropathy
	Granulomatosis with polyangiitis
	Post streptococcal glomerulonephritis
	Membranous nephropathy

Dashboard
Overall score: 0%
1 -

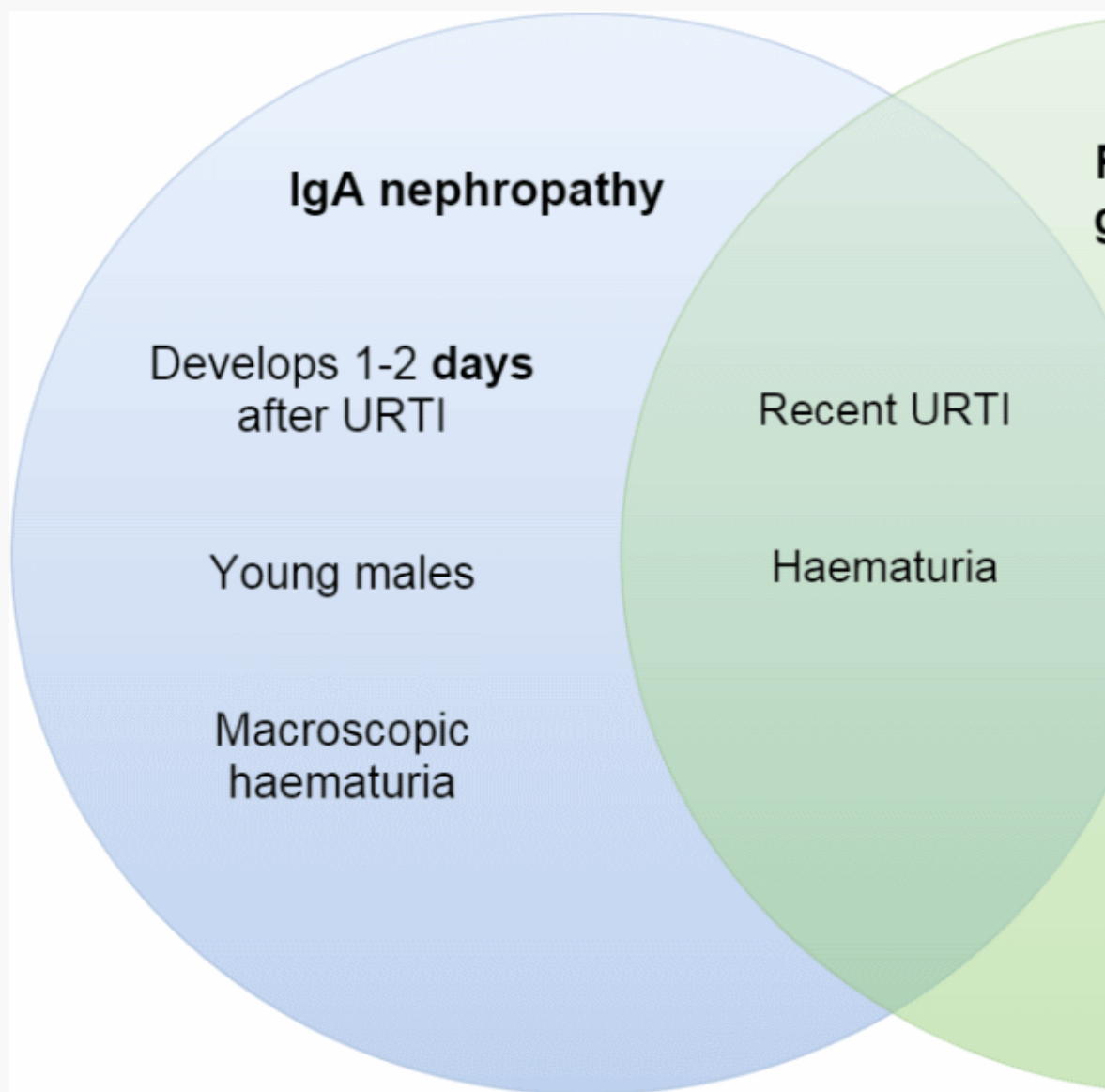
Question 48 of 144

An 18-year-old male presented with a 1-week history of haematuria. He described it initially as few drops of blood in his urine. On the day of admission he was passing 100 ml of urine. Over the last few days, he has been developing over the last few days. He has not questioned specifically he does not have any change in urine volume and no pain. He has not that his brother had been previously diagnosed with IgA nephropathy more than a one week course of penicillin. He has not had a one week course of amoxicillin. He has no past medical history of note.

Examination revealed the patient was a young male, 18 years old, 170 cm, 65 kg, heart rate 96bpm, respiratory rate of 16, oxygen saturation 98% on room air. Cardiovascular system revealed no murmurs, no rales, no peripheral oedema of his ankles. Examination of his gastrointestinal system revealed no tenderness, no periorbital oedema; examination of his ENT and neurological systems were both unremarkable. Initial investigation revealed the following results:

Hb	132 g/l
Platelets	428 * 10 ⁹ /l
WBC	14.2 * 10 ⁹ /l
ESR	26 mm/hr

Na ⁺	138 mmol/l
K ⁺	5.2 mmol/l
Urea	6.4 mmol/l
Creatinine	77 µmol/l
CRP	18 mg/l



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Bilirubin	18 µmol/l
ALP	82 u/l
ALT	21 u/l
Protein	78 g/l
Albumin	39 g/l

Chest x-ray: normal appearance of heart and lung fields

ECG: sinus tachycardia 108bpm

Urinalysis: blood +++++ protein +++++, ketones +, negative all other parameters

Urine MCS: awaiting result

Blood MCS: awaiting result

What is the most likely diagnosis?

	Rapidly progressive glomerulonephritis
	Berger's nephropathy
	Granulomatosis with polyangiitis
	Post streptococcal glomerulonephritis
	Membranous nephropathy

Dashboard
Overall score: 0%
1 -

□ Question 48 of 144

□ □

An 18-year-old male presented to the Emergency Department complaining of blood in his urine for the last day. He described it initially as few drops of dark blood at the end of micturition but has gradually worsened such that at the time of admission he was passing large amounts of cola coloured urine. He also complained of swollen ankles and puffy eyes developing over the last few hours and had been feeling increasing lethargic and unwell over the last two days. When questioned specifically he denied the presence of shortness of breath, chest pain, haemoptysis, previous haematuria or change in urine volume and had otherwise been well in himself. He had no previous renal problems, though he recalled that his brother had been prescribed a course of steroids when he was aged nine years old for leaky kidneys. Other than a one week course of phenoxymethylpenicillin 500mg QDS prescribed by his GP two weeks ago for tonsillitis and a one week course of amoxicillin 500mg TDS prescribed 6 months ago for acute sinusitis he had no drug history and no past medical history of note.

Examination revealed the presence of a young athletic male with a blood pressure of 162/84 mmHg, heart rate of 96bpm, respiratory rate of 18/min, oxygen saturations of 95% on air and temperature of 37.1 Celsius. Examination of the cardiovascular system revealed the presence of normal heart sounds, a JVP of 3cm and the presence of bilateral pitting oedema of his ankles. Examination of his respiratory system was unremarkable with no signs of respiratory distress. Examination of his gastrointestinal system was unremarkable. Examination of his face revealed the presence of bilateral periorbital oedema; examination of his ENT and neurological systems were both unremarkable.

Initial investigation revealed the following results:

Hb	132 g/l
Platelets	428* 10 ⁹ /l
WBC	14.2 * 10 ⁹ /l
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Na ⁺	138 mmol/l
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Bilirubin	18 µmol/l
ALP	82 u/l
ALT	21 u/l
Protein	78 g/l
Albumin	39 g/l

Chest x-ray: normal appearance of heart and lung fields

ECG: sinus tachycardia 108bpm

Urinalysis: blood ++++ protein ++++, ketones +, negative all other parameters

Urine MCS: awaiting result

Blood MCS: awaiting result

What is the most likely diagnosis?

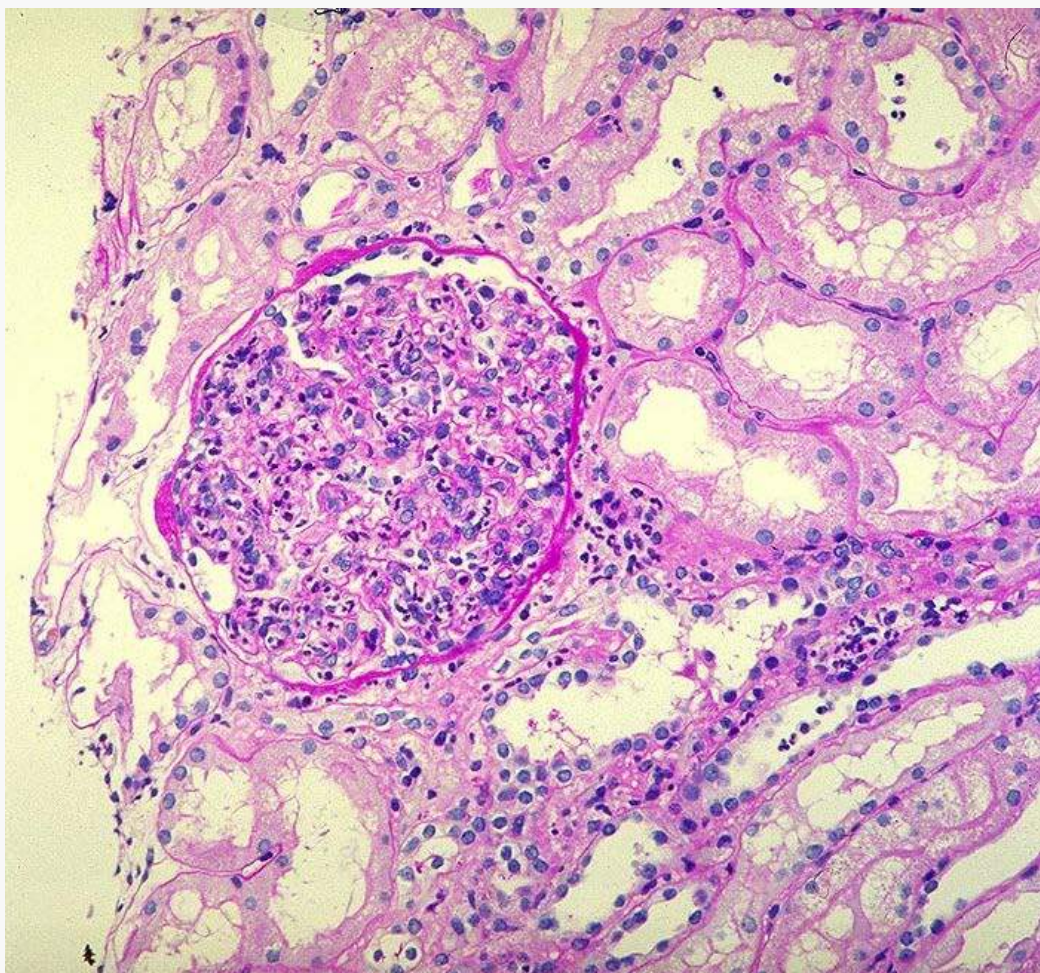


	Rapidly progressive glomerulonephritis
	Berger's nephropathy
	Granulomatosis with polyangiitis
	Post streptococcal glomerulonephritis
	Membranous nephropathy

Dashboard

Overall score: 0%

1 -



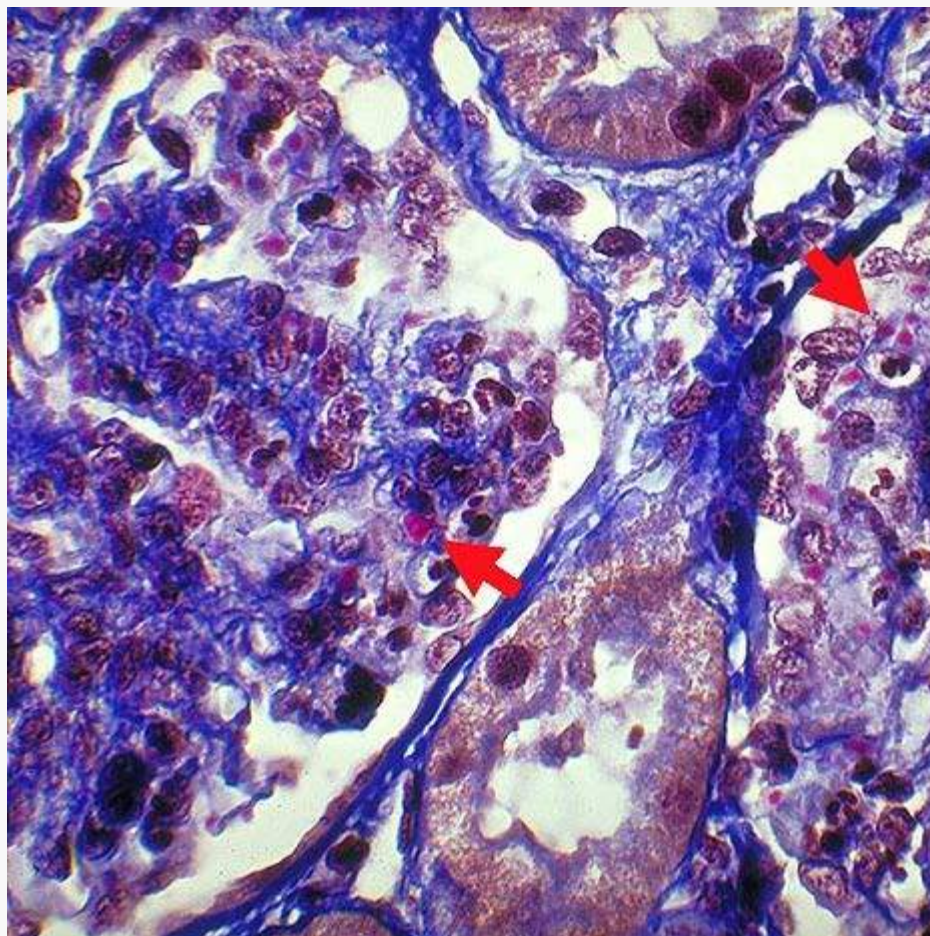
□ Question 48 of 144

An 18-year-old male presented to the Emergency department. He described it initially as few drops of dark blood per rectum. On admission he was passing large amounts of dark red stool. Over the last few hours he had been developing a severe abdominal pain and had been vomiting. He denied the presence of a fever, a change in urine volume and had otherwise been well. His brother had been prescribed a course of amoxicillin 500mg TDS for more than a one week course of pharyngitis. His past medical history was unremarkable.

Examination revealed the presence of a young man with a heart rate of 96bpm, respiratory rate of 18/min, oxygen saturation of 98% on room air. Cardiovascular examination revealed the presence of normal heart sounds, a JVP of 3cm and the presence of bilateral pitting oedema of his ankles. Examination of his respiratory system was unremarkable with no signs of respiratory distress. Examination of his gastrointestinal system was unremarkable. Examination of his face revealed the presence of bilateral periorbital oedema; examination of his ENT and neurological systems were both unremarkable. Initial investigation revealed the following results:

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Chest x-ray: normal appearance of heart and lung fields

ECG: sinus tachycardia 108bpm

Urinalysis: blood +++++ protein +++++, ketones +, negative all other parameters

Urine MCS: awaiting result

Blood MCS: awaiting result

What is the most likely diagnosis?

	Rapidly progressive glomerulonephritis
	Berger's nephropathy
	Granulomatosis with polyangiitis
	Post streptococcal glomerulonephritis
	Membranous nephropathy

Dashboard
Overall score: 0% 1 -

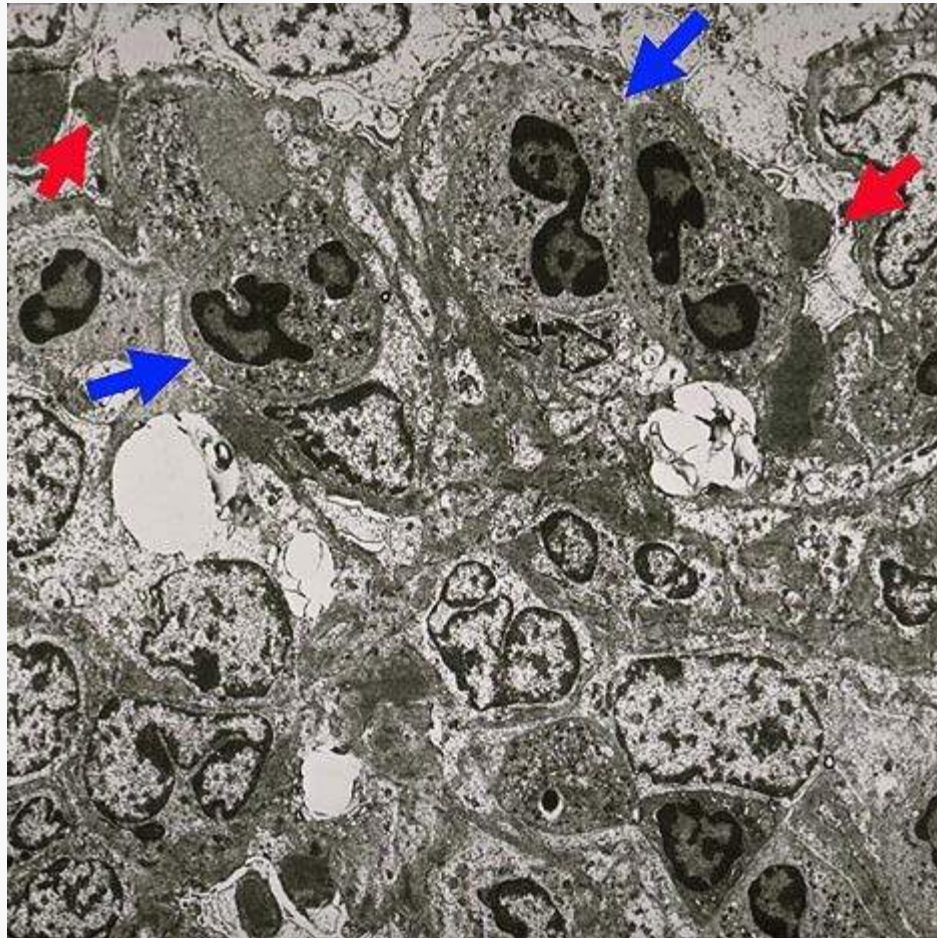
□ Question 48 of 144

An 18-year-old male presented to the Emergency department. He described it initially as few drops of dark blood per rectum. On admission he was passing large amounts of dark blood. Over the last few hours he had been developing over the last few hours and had been questioning specifically he denied the presence of a change in urine volume and had otherwise been well. He had been prescribed a course of amoxicillin 500mg TDS for more than a one week course of phenoxymethylpenicillin. He had a one week course of amoxicillin 500mg TDS pre admission. His past medical history of note.

Examination revealed the presence of a young man with a heart rate of 96bpm, respiratory rate of 18/min, oxygen saturation of 98% on room air. Cardiovascular system revealed the presence of normal heart sounds, a JVP of 3cm and the presence of bilateral pitting oedema of his ankles. Examination of his respiratory system was unremarkable with no signs of respiratory distress. Examination of his gastrointestinal system was unremarkable. Examination of his face revealed the presence of bilateral periorbital oedema; examination of his ENT and neurological systems were both unremarkable. Initial investigation revealed the following results:

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Chest x-ray: normal appearance of heart and lung fields

ECG: sinus tachycardia 108bpm

Urinalysis: blood +++++ protein +++++, ketones +, negative all other parameters

Urine MCS: awaiting result

Blood MCS: awaiting result

What is the most likely diagnosis?

	Rapidly progressive glomerulonephritis
	Berger's nephropathy
	Granulomatosis with polyangiitis
	Post streptococcal glomerulonephritis
	Membranous nephropathy

Dashboard
Overall score: 0% 1 -

□ Question 49 of 144

□ □

A 62-year-old man is seen in renal transplant clinic. He had a cadaveric kidney transplant 1 years ago that was initially complicated by rejection and has required high dose immunosuppression. He has good graft function with creatinine 121 $\mu\text{mol/l}$ and no proteinuria. He complains of 2 stone weight loss in 2 months and feels tired.

There is a large painless lymph node in his right axilla and a palpable node in his left inguinal region.

Hb	8.7 g/dl
Platelets	$195 \times 10^9/\text{l}$
WBC	$6.7 \times 10^9/\text{l}$

Which is the most useful virology test?

	BK virus
	Cytomegalovirus
	Epstein Barr virus
	Hepatitis B
	HIV

Dashboard

Overall score: 0%

1 -

□ Question 49 of 144

□ □

A 62-year-old man is seen in renal transplant clinic. He had a cadaveric kidney transplant 1 years ago that was initially complicated by rejection and has required high dose immunosuppression. He has good graft function with creatinine 121 $\mu\text{mol/l}$ and no proteinuria. He complains of 2 stone weight loss in 2 months and feels tired.

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Which is the most useful virology test?

	BK virus
	Cytomegalovirus
	Epstein Barr virus
	Hepatitis B
	HIV

Dashboard

Overall score: **0%**

1 -

□ Question 50 of 144

□ □

A 47-year-old lady presented to the Emergency Department with a three-day history of rapid deterioration. She complained of feeling unwell for the last three days with extreme fatigue and reduced appetite, followed by a gradual but rapid onset of swelling in both her legs. She complained further of changes in her urine over the last few days, stating that it appeared frothy and over the last day noticed the presence of blood in her urine, but she denied the presence of urinary frequency, urgency or dysuria. She complained of feeling short of breath on exertion but not at rest and did not suffer from chest pain. She had a past medical history comprising SLE which was diagnosed 12 years ago and hypertension for which she was prescribed ramipril 10mg OD, azathioprine 50mg OD, methotrexate 20mg once per week and folic acid 5mg once per week.

Examination revealed the presence of an unwell lady with a blood pressure of 166/86 mmHg, heart rate of 102, a temperature of 37.1 Celsius and respiratory rate of 22/min. Examination of her cardiovascular system revealed the presence of gross bilateral pitting oedema in her lower limbs to the level of her mid shins, with a JVP of 3cm and normal heart and breath sounds. Examination of her gastrointestinal system was unremarkable.

Initial investigations reveal the following results. Results from DMARD monitoring bloods 2 months ago are shown in brackets.

Hb	122 g/l (126)
Platelets	242 * 10 ⁹ /l (248)
WBC	7.8 * 10 ⁹ /l (8.2)
ESR	26 mm/hr

Na ⁺	131 mmol/l (138)
K ⁺	6.2 mmol/l (5.2)
Urea	22.2 mmol/l (6.4)
Creatinine	268 µmol/l (77)
CRP	42 mg/l

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Bilirubin	18 µmol/l (18)
ALP	76 u/l (82)
ALT	72 u/l (21)
Total protein	52 g/l (78)
Albumin	18 g/l (39)
Glucose	8.2 mmol/l

Chest x-ray: normal heart size and lung fields

ECG: sinus tachycardia 108bpm no acute changes

Urinalysis: blood ++, protein +++++, leuc trace, nit negative, gluc negative, ketone trace

What is the most likely diagnosis?

<input type="radio"/>	Berger's nephropathy
<input type="radio"/>	Membranous glomerulonephritis
<input type="radio"/>	Focal segmental glomerulosclerosis
<input type="radio"/>	Rapidly progressive glomerulonephritis
<input type="radio"/>	Mesangiocapillary glomerulonephritis

Dashboard

Overall score: **0%**

1 -

□ Question 50 of 144

□ □

A 47-year-old lady presented to the Emergency Department with a three-day history of rapid deterioration. She complained of feeling unwell for the last three days with extreme fatigue and reduced appetite, followed by a gradual but rapid onset of swelling in both her legs. She complained further of changes in her urine over the last few days, stating that it appeared frothy and over the last day noticed the presence of blood in her urine, but she denied the presence of urinary frequency, urgency or dysuria. She complained of feeling short of breath on exertion but not at rest and did not suffer from chest pain. She had a past medical history comprising SLE which was diagnosed 12 years ago and hypertension for which she was prescribed ramipril 10mg OD, azathioprine 50mg OD, methotrexate 20mg once per week and folic acid 5mg once per week.

Examination revealed the presence of an unwell lady with a blood pressure of 166/86 mmHg, heart rate of 102, a temperature of 37.1 Celsius and respiratory rate of 22/min. Examination of her cardiovascular system revealed the presence of gross bilateral pitting oedema in her lower limbs to the level of her mid shins, with a JVP of 3cm and normal heart and breath sounds. Examination of her gastrointestinal system was unremarkable.

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ECG: sinus tachycardia 108bpm no acute changes

Urinalysis: blood ++, protein +++++, leuc trace, nit negative, gluc negative, ketone trace

What is the most likely diagnosis?

	Berger's nephropathy
	Membranous glomerulonephritis
	Focal segmental glomerulosclerosis
	Rapidly progressive glomerulonephritis
	Mesangiocapillary glomerulonephritis

Dashboard

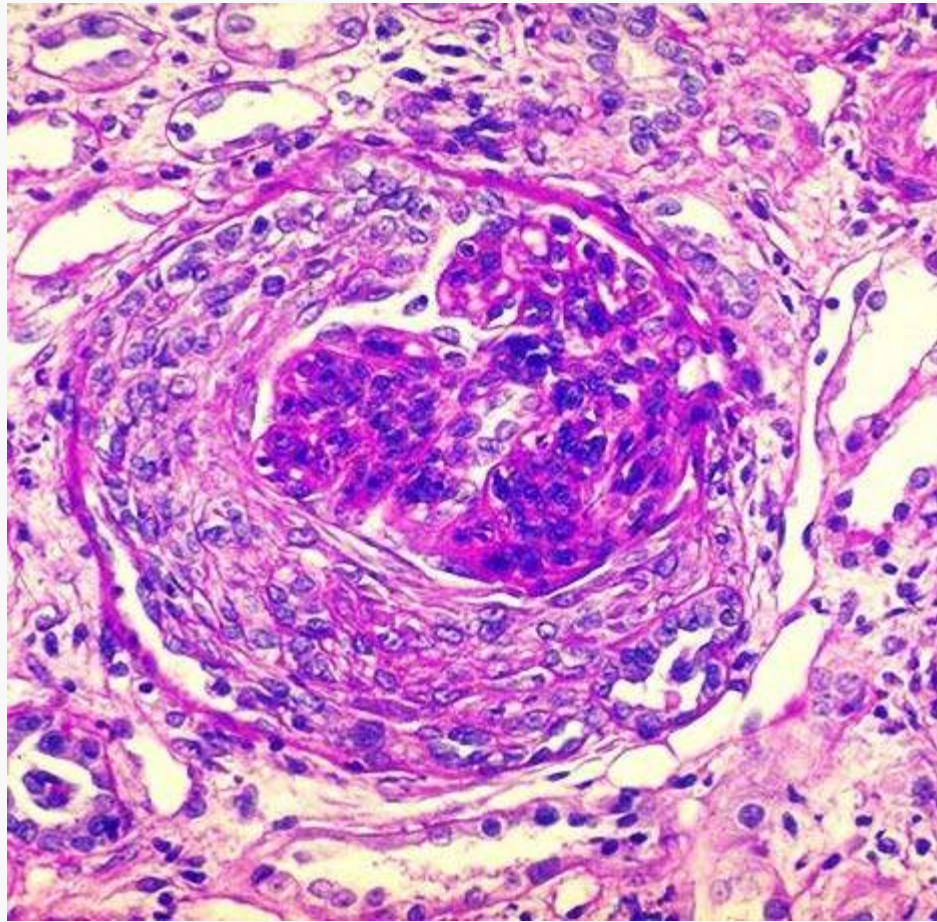
Overall score: **0%**

1 -

Question 50 of 144

A 47-year-old lady presented to the Emergency department complaining of feeling unwell for the last three days. She reported a rapid onset of swelling in both her legs. She commented that the swelling appeared frothy and over the last day noticed a decrease in urinary frequency, urgency or dysuria. She cannot tolerate exertion and has recently suffered from chest pain. She has a past medical history of hypertension for which she was prescribed ramipril 10mg once per week and folic acid 5mg once per week.

Examination revealed the presence of an unwell-appearing lady with a temperature of 37.1 Celsius and respiratory rate of 22 per minute. There was no presence of gross bilateral pitting oedema in her lower limbs. Heart sounds were normal. Examination of her general appearance was unremarkable.



Initial investigations reveal the following results. Results from DMARD monitoring bloods 2 months ago are shown in brackets.

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Chest x-ray: normal heart size and lung fields

ECG: sinus tachycardia 108bpm no acute changes

Urinalysis: blood ++, protein +++++, leuc trace, nit negative, gluc negative, ketone trace

What is the most likely diagnosis?

	Berger's nephropathy
	Membranous glomerulonephritis
	Focal segmental glomerulosclerosis
	Rapidly progressive glomerulonephritis
	Mesangiocapillary glomerulonephritis

Dashboard

Overall score: **0%**

1 -

□ Question 50 of 144

□ □

A 47-year-old lady presented to the Emergency Department with a three-day history of rapid deterioration. She complained of feeling unwell for the last three days with extreme fatigue and reduced appetite, followed by a gradual but rapid onset of swelling in both her legs. She complained further of changes in her urine over the last few days, stating that it appeared frothy and over the last day noticed the presence of blood in her urine, but she denied the presence of urinary frequency, urgency or dysuria. She complained of feeling short of breath on exertion but not at rest and did not suffer from chest pain. She had a past medical history comprising SLE which was diagnosed 12 years ago and hypertension for which she was prescribed ramipril 10mg OD, azathioprine 50mg OD, methotrexate 20mg once per week and folic acid 5mg once per week.

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ECG: sinus tachycardia 108bpm no acute changes

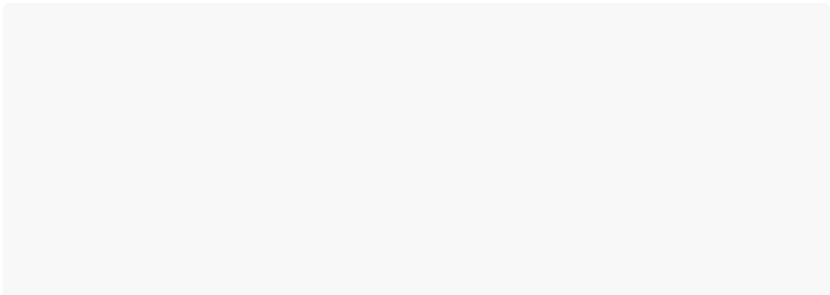
Urinalysis: blood ++, protein +++++, leuc trace, nit negative, gluc negative, ketone trace

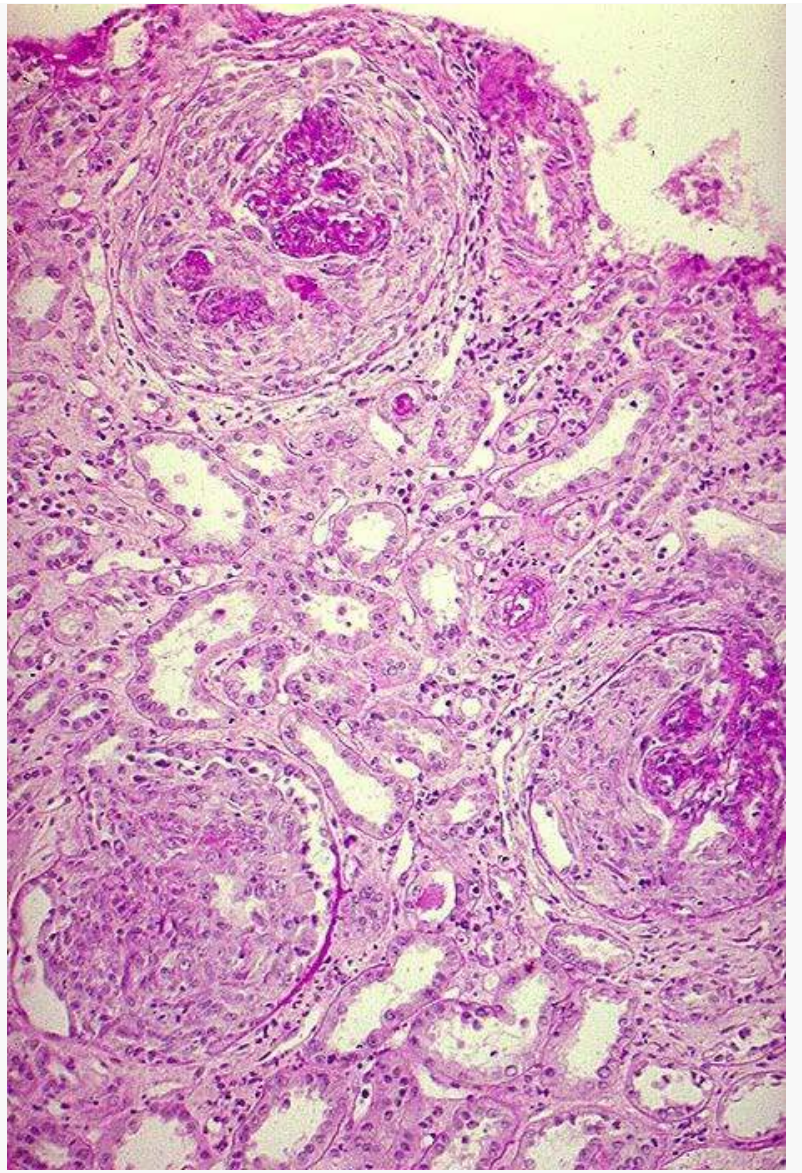
What is the most likely diagnosis?

	Berger's nephropathy
	Membranous glomerulonephritis
	Focal segmental glomerulosclerosis
	Rapidly progressive glomerulonephritis
	Mesangiocapillary glomerulonephritis

Dashboard

Overall score: **0%**
1 -





□ Question 51 of 144



A 51-year-old gentleman presents to the Emergency Department with a 4-hour history of severe left-sided flank pain. The pain is constant, but waxes and wanes and is associated with multiple episodes of vomiting.

His past medical history is remarkable for congestive cardiac failure, gout, and glaucoma. He has also recently been diagnosed with HIV and started highly active antiretroviral treatment (HAART) 6 months ago.

On examination, the patient is afebrile. His pulse is 96bpm and his blood pressure is 142/79mmHg. His chest is clear and his abdomen is soft, with left-sided costovertebral angle tenderness evident on palpation.

His urine dipstick is as follows:

pH	6.0
Specific gravity	1.020
Blood	+++
Protein	+

A CT KUB is requested and demonstrates inflammatory stranding around the left kidney with mild hydronephrosis but no obvious ureteric calculi.

The patient is admitted for analgesia and hydration but remains symptomatic over the next 24 hours. He undergoes intravenous pyelography which demonstrates a filling defect in the mid-ureter.

Which of the following medications is most likely to be responsible for his symptoms?

	Acetazolamide
	Furosemide
	Tenofovir
	Indinavir

	Allopurinol
--	-------------

Dashboard

Overall score: **0%**
1 -

□ Question 51 of 144



A 51-year-old gentleman presents to the Emergency Department with a 4-hour history of severe left-sided flank pain. The pain is constant, but waxes and wanes and is associated with multiple episodes of vomiting.

His past medical history is remarkable for congestive cardiac failure, gout, and glaucoma. He has also recently been diagnosed with HIV and started highly active antiretroviral treatment (HAART) 6 months ago.

On examination, the patient is afebrile. His pulse is 96bpm and his blood pressure is 142/79mmHg. His chest is clear and his abdomen is soft, with left-sided costovertebral angle tenderness evident on palpation.

His urine dipstick is as follows:

pH	6.0
Specific gravity	1.020
Blood	+++
Protein	+

A CT KUB is requested and demonstrates inflammatory stranding around the left kidney with mild hydronephrosis but no obvious ureteric calculi.

The patient is admitted for analgesia and hydration but remains symptomatic over the next 24 hours. He undergoes intravenous pyelography which demonstrates a filling defect in the mid-ureter.

Which of the following medications is most likely to be responsible for his symptoms?

	Acetazolamide
	Furosemide
	Tenofovir
	Indinavir

	Allopurinol

Dashboard

Overall score: **0%**
1 -

□ Question 52 of 144

□ □

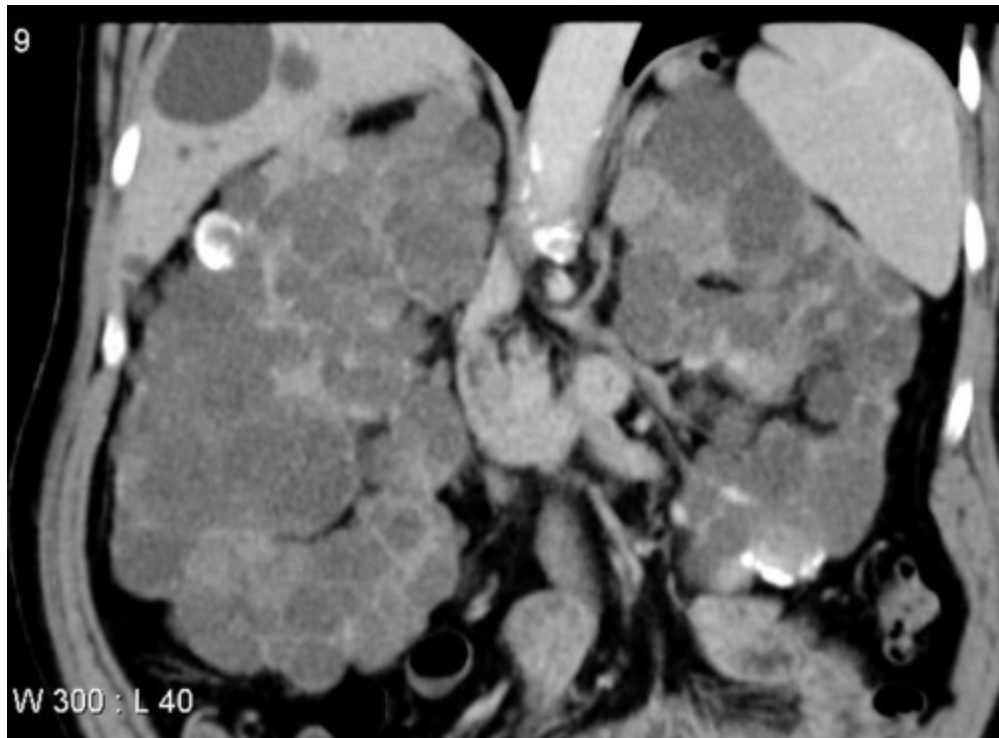
A 45-year-old man is presents to the Emergency Department feeling sick, complaining of abdominal pain, pruritus and reduced urine output. Initial bloods show the following:

Na ⁺	142 mmol/l
K ⁺	5.8 mmol/l
Urea	31.3 mmol/l
Creatinine	450 µmol/l

Urine dipstick: leuc +, protein +, blood+++

His past medical history includes sensorineural hearing loss and recent treatment for *Chlamydia*.

An abdominal ultrasound is quickly performed with a subsequent CT to confirm the findings:



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What is the most likely cause of the renal failure?

<input type="radio"/>	Acute pyelonephritis
<input type="radio"/>	Autosomal dominant polycystic kidney disease
<input type="radio"/>	Metastatic renal cell cancer
<input type="radio"/>	Alport's syndrome
<input type="radio"/>	Nephrolithiasis with associated hydronephrosis

Dashboard

Overall score: **0%**

1 -

□ Question 52 of 144

□ □

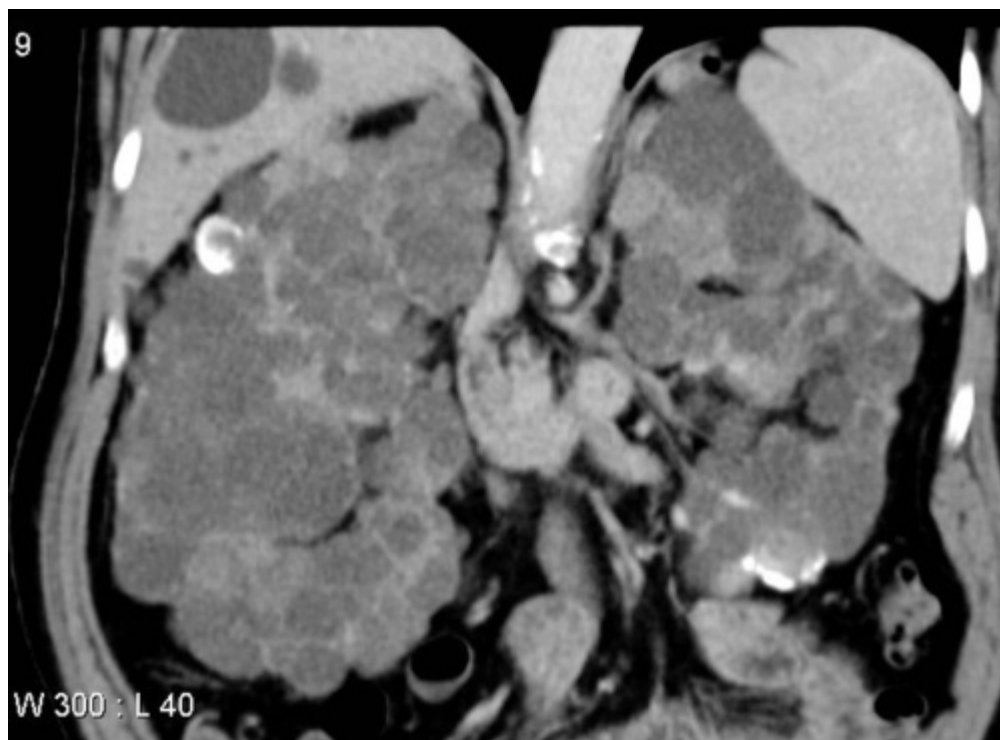
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An abdominal ultrasound is quickly performed with a subsequent CT to confirm the findings:



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What is the most likely cause of the renal failure?

	Acute pyelonephritis
	Autosomal dominant polycystic kidney disease
	Metastatic renal cell cancer
	Alport's syndrome
	Nephrolithiasis with associated hydronephrosis

Dashboard

Overall score: **0%**

1 -

□ Question 52 of 144

□ □

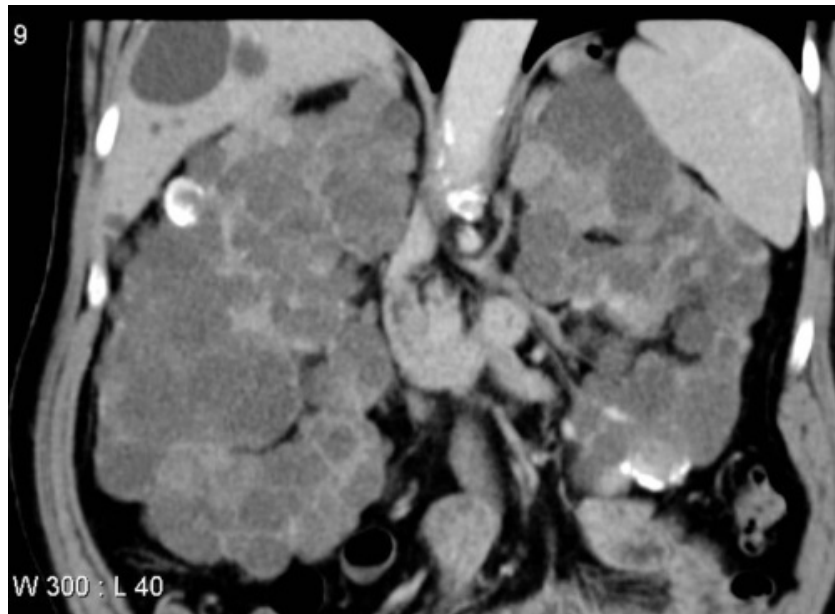
A 45-year-old man is presents to the Emergency Department feeling sick, complaining of abdominal pain, pruritus and reduced urine output. Initial bloods show the following:

Na ⁺	142 mmol/l
K ⁺	5.8 mmol/l
Urea	31.3 mmol/l
Creatinine	450 µmol/l

Urine dipstick: leuc +, protein +, blood+++

His past medical history includes sensorineural hearing loss and recent treatment for *Chlamydia*.

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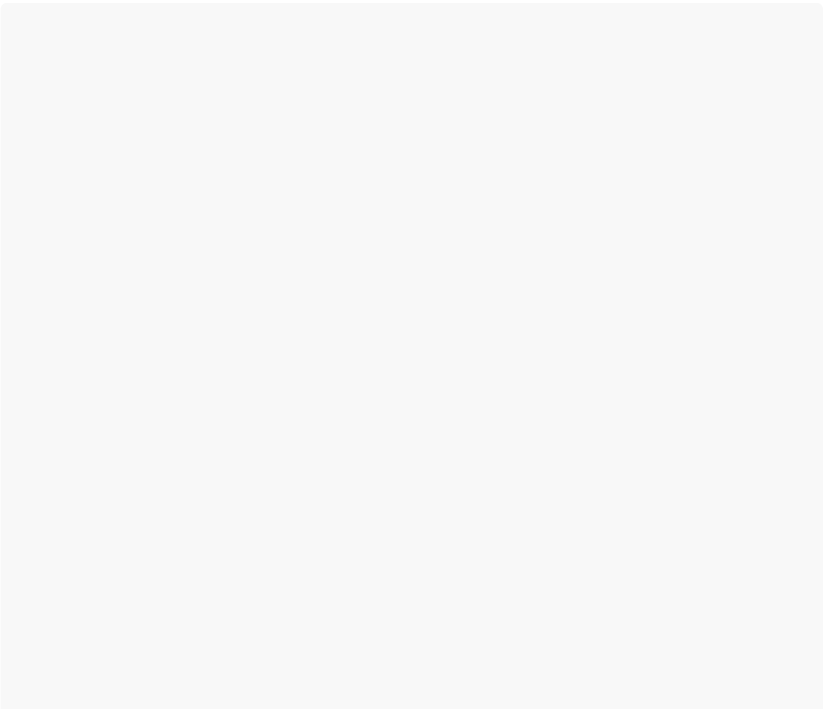
What is the most likely cause of the renal failure?

	Acute pyelonephritis
	Autosomal dominant polycystic kidney disease

	Metastatic renal cell cancer
	Alport's syndrome
	Nephrolithiasis with associated hydronephrosis

Dashboard

Overall score: **0%**
1 -





□ Question 52 of 144

□ □

A 45-year-old man is presents to the Emergency Department feeling sick, complaining of abdominal pain, pruritus and reduced urine output. Initial bloods show the following:

Na ⁺	142 mmol/l
K ⁺	5.8 mmol/l
Urea	31.3 mmol/l
Creatinine	450 µmol/l

Urine dipstick: leuc +, protein +, blood+++

His past medical history includes sensorineural hearing loss and recent treatment for *Chlamydia*.

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What is the most likely cause of the renal failure?

	Acute pyelonephritis
	Autosomal dominant polycystic kidney disease
	Metastatic renal cell cancer
	Alport's syndrome
	Nephrolithiasis with associated hydronephrosis

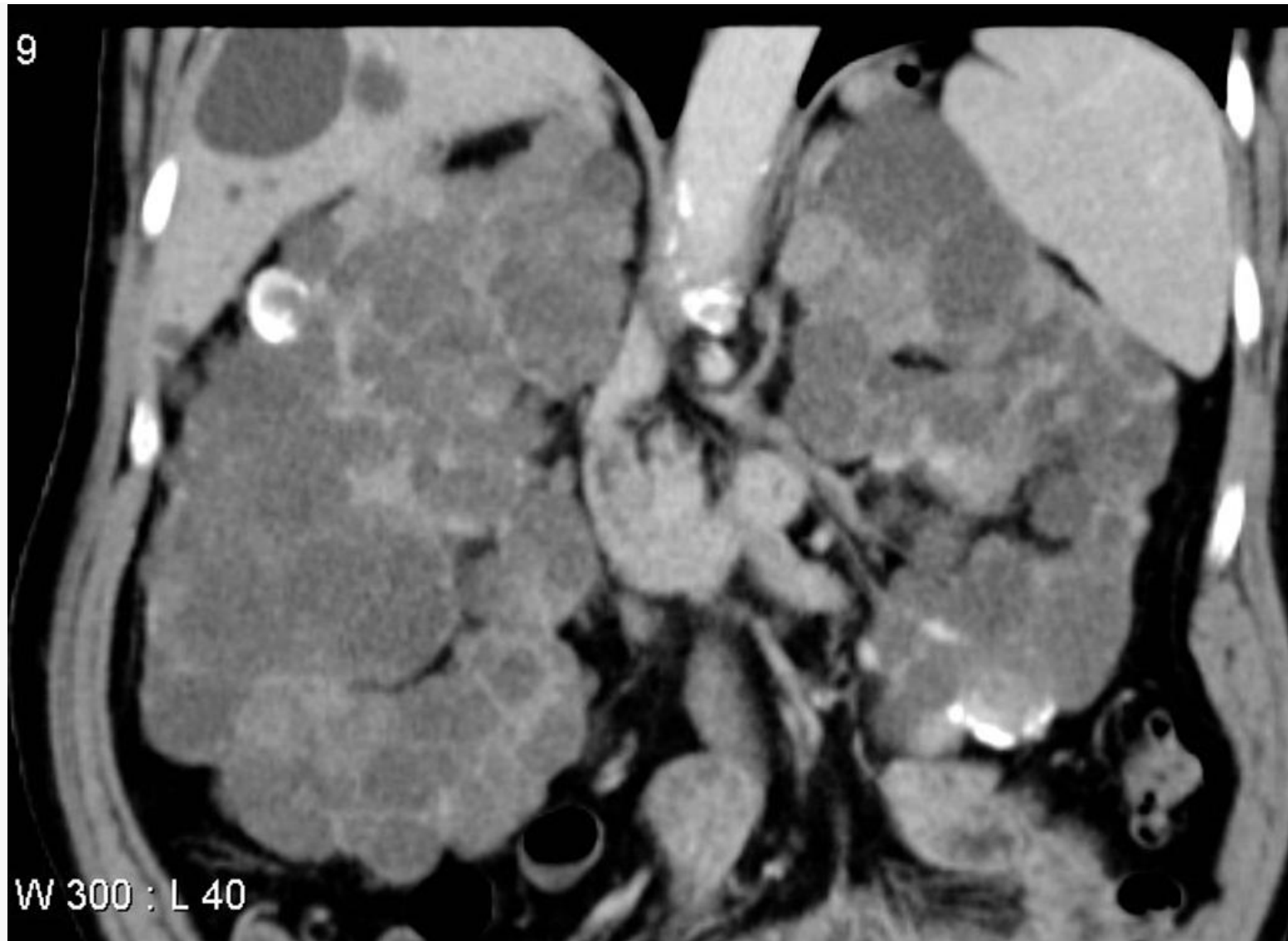
Dashboard

Overall score: 0%

1 -

9

W 300 : L 40



□ Question 52 of 144

□ □

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Na ⁺	142 mmol/l
K ⁺	5.8 mmol/l
Urea	31.3 mmol/l
Creatinine	450 µmol/l

Urine dipstick: leuc +, protein +, blood+++

His past medical history includes sensorineural hearing loss and recent treatment for *Chlamydia*.

An abdominal ultrasound is quickly performed with a subsequent CT to confirm the findings:



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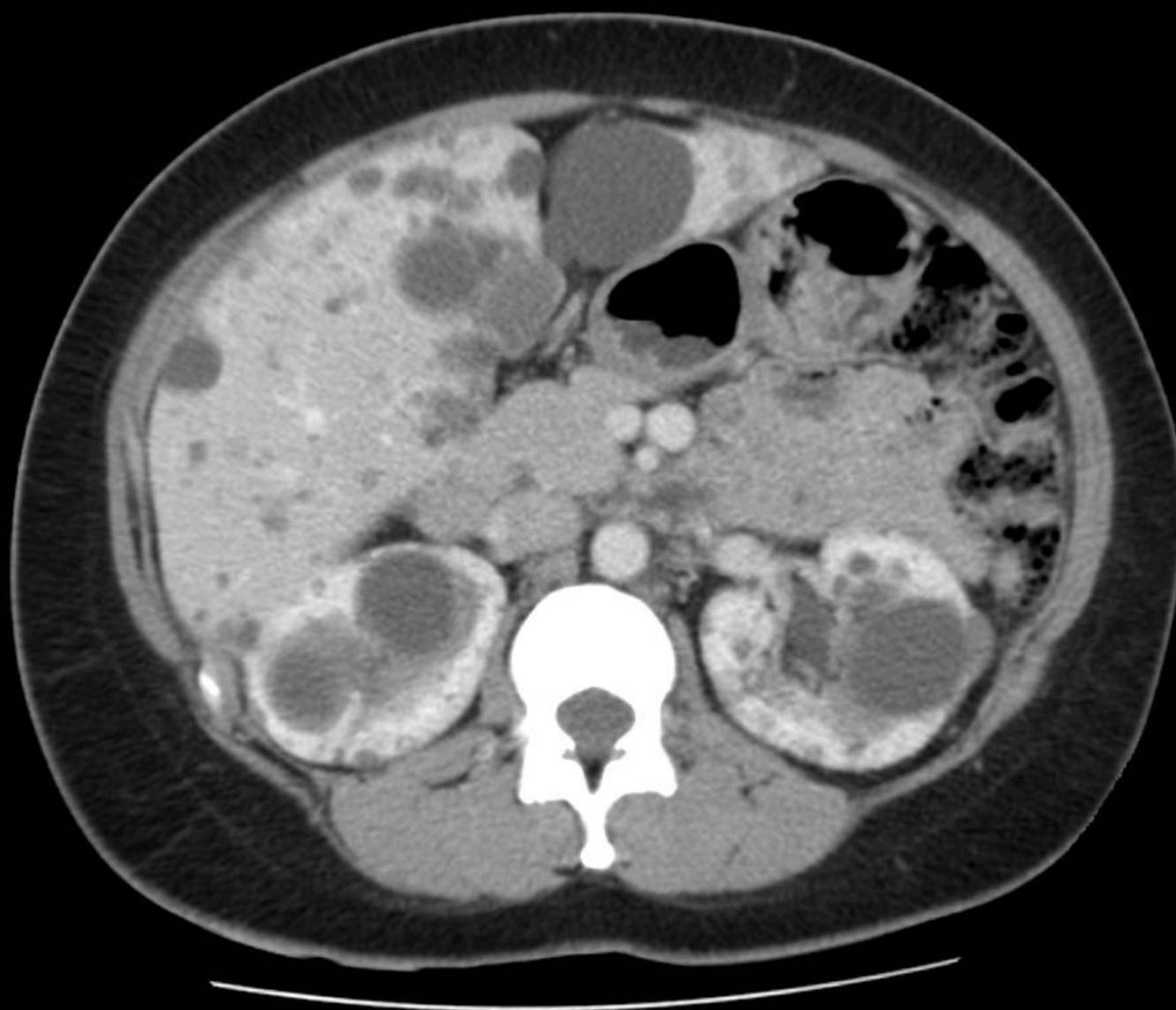
What is the most likely cause of the renal failure?

	Acute pyelonephritis
	Autosomal dominant polycystic kidney disease
	Metastatic renal cell cancer
	Alport's syndrome
	Nephrolithiasis with associated hydronephrosis

Dashboard

Overall score: **0%**

1 -



□ Question 53 of 144



A 50 year-old woman is referred by her GP due to refractory hypertension, despite having taken in the past ramipril, bendroflumethiazide and amlodipine. She has no other symptoms and past medical history includes hyperthyroidism which was treated with carbimazole ten years ago. She has a 20-year pack history and drinks 5-10 units of alcohol per week. Her occupation is as an office worker and she has recently complained of pain in both of her calves when walking the 15 minutes to and from work. On examination, her blood pressure is 161/98 mmHg, she has cold peripheries and she is otherwise well.

Blood tests reveal:

Na ⁺	145 mmol/l
K ⁺	3.3 mmol/l
Urea	5.1 mmol/l
Creatinine	81 µmol/l
Renin activity	High
Aldosterone activity	High

What is the most likely diagnosis?

	Renal artery sclerosis
	Fibromuscular dysplasia
	Cushing's disease
	Cushing's syndrome
	Primary hyperaldosteronism

Dashboard

Overall score: **0%**

1 -

□ Question 53 of 144



A 50 year-old woman is referred by her GP due to refractory hypertension, despite having taken in the past ramipril, bendroflumethiazide and amlodipine. She has no other symptoms and past medical history includes hyperthyroidism which was treated with carbimazole ten years ago. She has a 20-year pack history and drinks 5-10 units of alcohol per week. Her occupation is as an office worker and she has recently complained of pain in both of her calves when walking the 15 minutes to and from work. On examination, her blood pressure is 161/98 mmHg, she has cold peripheries and she is otherwise well.

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Creatinine	81 µmol/l
Renin activity	High
Aldosterone activity	High

What is the most likely diagnosis?

	Renal artery sclerosis
	Fibromuscular dysplasia
	Cushing's disease
	Cushing's syndrome
	Primary hyperaldosteronism

Dashboard

Overall score: **0%**

1 -

□ Question 54 of 144

□ □

An 80-year-old gentleman presents with gross peripheral oedema and lethargy. Further history reveals a history of dysphagia and a subsequent CT scan reveals oesophageal carcinoma. Despite initial treatment with furosemide and prednisolone, his renal function continues to deteriorate. His blood results are as follows:

Na ⁺	132 mmol/l
K ⁺	5.6 mmol/l
HCO ₃ ⁻	17 mmol/l
Urea	27.5 mmol/l
Creatinine	352 µmol/l
albumin	19 g/L

He agrees to undergo a renal biopsy. What do you expect the biopsy to show?

	IgA nephropathy
	Membranous glomerulonephritis
	Normal biopsy
	Focal segmental glomerulonephritis
	Rapidly progressive glomerulonephritis

Dashboard

Overall score: 0%

1 -

□ Question 54 of 144

□ □

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	Normal biopsy
	Focal segmental glomerulonephritis
	Rapidly progressive glomerulonephritis

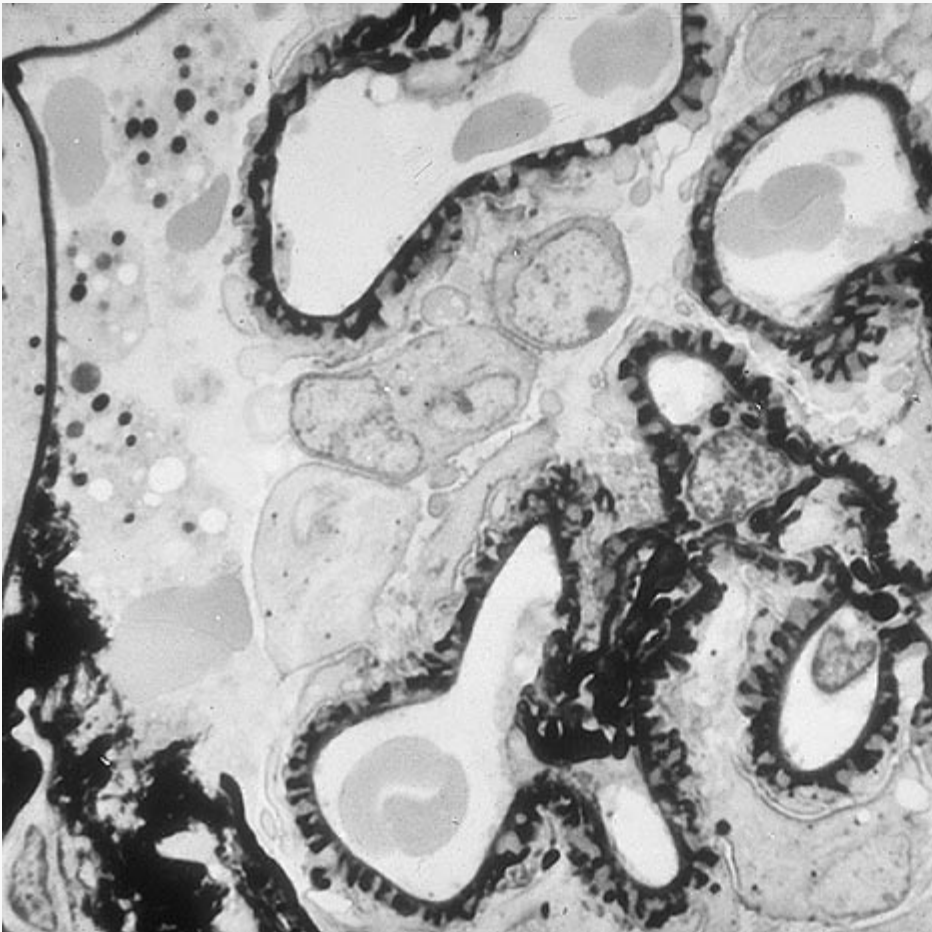
Dashboard

Overall score: **0%****1** -

Question 54 of 144

An 80-year-old gentleman presents with gross dysphagia and a subsequent CT scan reveals a large oesophageal mass. He is treated with prednisolone, his renal function continues to deteriorate.

Na ⁺	132 mmol/l
K ⁺	5.6 mmol/l
HCO ₃ ⁻	17 mmol/l
Urea	27.5 mmol/l
Creatinine	352 µmol/l
albumin	19 g/L



He agrees to undergo a renal biopsy. What do you expect the biopsy to show?

	IgA nephropathy
	Membranous glomerulonephritis
	Normal biopsy
	Focal segmental glomerulonephritis
	Rapidly progressive glomerulonephritis

□ Question 55 of 144



A 50 year-old man presents with right flank pain. The pain is 9/10 on the pain scale, and does not radiate anywhere. He has also suffered from thirst, polyuria and fatigue, which he has put down to stress from being off work due to a history of chronic lumbar back pain. He has a smoking history of 10 pack years and drinks on average a couple of pints of beer at the weekends. He has no relevant family history. On examination, he has tenderness in the right flank and lower back and his blood pressure is 149/92 mmHg.

Blood tests reveal:

Hb	9.9 g/dL
Platelets	284 * 10 ⁹ /l
WBC	10.5 * 10 ⁹ /l
Mean corpuscular volume	86 fl
Na ⁺	129 mmol/l
K ⁺	3.9 mmol/l
Urea	16.3 mmol/l
Creatinine	410 µmol/l
Calcium	2.19 mmol/l
Phosphate	1.79 mmol/l
Uric acid	0.40 mmol/l

Urinalysis reveals protein ++, leucocytes +. Microscopy reveals renal papillary cells and casts. No organisms are identified.

A plain abdominal x-ray is negative for calculi and calcification. Intravenous urogram reveals clubbed calyces and ring signs.

What is the most likely diagnosis?

	Renal calculi
	Acute interstitial nephritis
	Pyelonephritis
	Analgesic nephropathy
	Acute tubular necrosis

Dashboard

Overall score: **0%**

1 -

□ Question 55 of 144



A 50 year-old man presents with right flank pain. The pain is 9/10 on the pain scale, and does not radiate anywhere. He has also suffered from thirst, polyuria and fatigue, which he has put down to stress from being off work due to a history of chronic lumbar back pain. He has a smoking history of 10 pack years and drinks on average a couple of pints of beer at the weekends. He has no relevant family history. On examination, he has tenderness in the right flank and lower back and his blood pressure is 149/92 mmHg.

Blood tests reveal:

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A plain abdominal x-ray is negative for calculi and calcification. Intravenous urogram reveals clubbed calyces and ring signs.

What is the most likely diagnosis?

	Renal calculi
	Acute interstitial nephritis
	Pyelonephritis
	Analgesic nephropathy
	Acute tubular necrosis

Dashboard

Overall score: **0%**
1 -

Question 56 of 144

A 55-year-old woman with a background of long-standing rheumatoid arthritis presents with worsening fatigue and weight loss, diarrhoea, and leg swelling. Additionally, she mentions pain in her wrists with 'pins and needles' at the tips of thumb and first two digits, which bothers her at night.

On examination she has waxy skin plaques about the axillary folds, macroglossia, hepatosplenomegaly, pitting oedema of the legs, and peripheral neuropathy. The faecal occult blood test is positive. Serum chemistry noted only mild hypoalbuminaemia. Urinalysis shows proteinuria with no haematuria.

Which of the following is the most appropriate next step in diagnosis?

	Serum protein electrophoresis
	X-ray of vertebral column and skull
	Biopsy of skin, rectal mucosa, or abdominal fat
	Renal biopsy
	Endomyocardial biopsy

Dashboard

Overall score: 0%

1 -

□ Question 56 of 144

□ □

A 55-year-old woman with a background of long-standing rheumatoid arthritis presents with worsening fatigue and weight loss, diarrhoea, and leg swelling. Additionally, she mentions pain in her wrists with 'pins and needles' at the tips of thumb and first two digits, which bothers her at night.

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Which of the following is the most appropriate next step in diagnosis?

	Serum protein electrophoresis
	X-ray of vertebral column and skull
	Biopsy of skin, rectal mucosa, or abdominal fat
	Renal biopsy
	Endomyocardial biopsy

Dashboard

Overall score: **0%****1** -

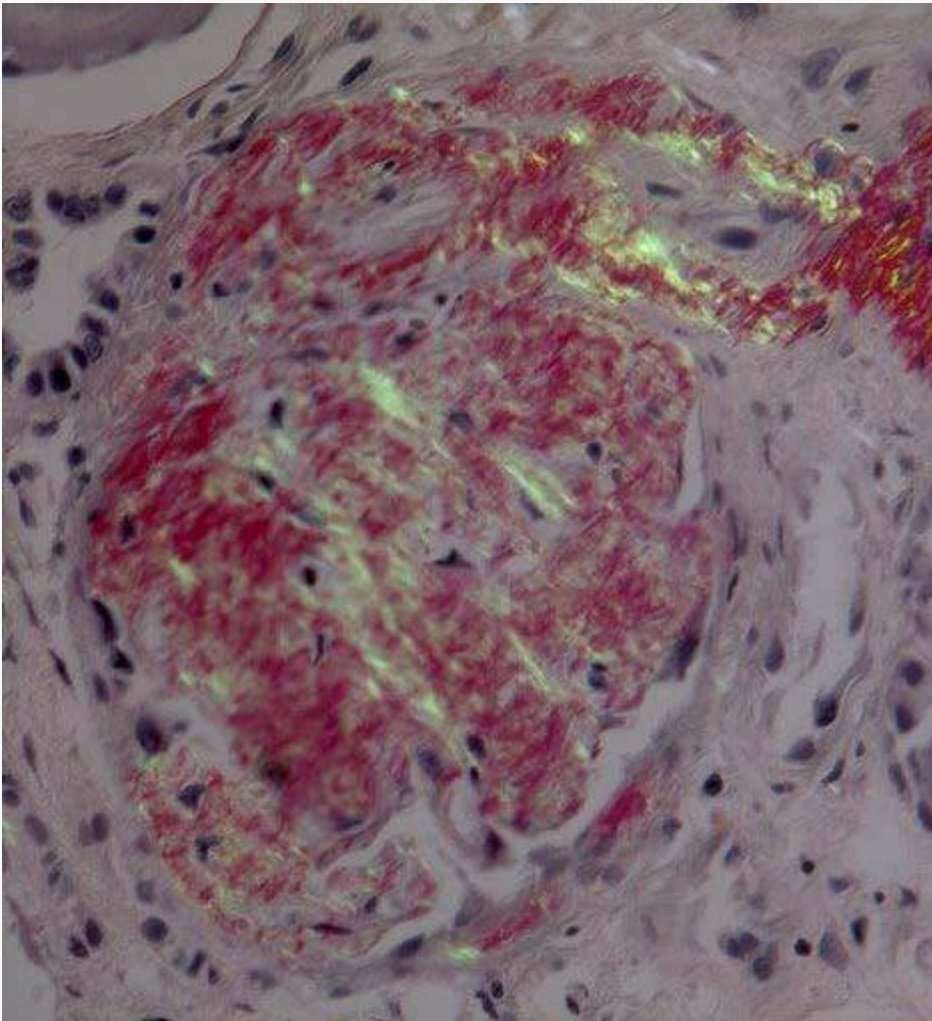
Question 56 of 144

A 55-year-old woman with a background of long-standing rheumatoid arthritis, weight loss, diarrhoea, and leg swelling. Additionally, she has a painless, red, tender thumb and first two digits, which bothers her at night.

On examination she has waxy skin plaques above the ankles, and peripheral neuropathy. The faecal occult blood test is positive. Urinalysis shows proteinuria.

Which of the following is the most appropriate next step in management?

	Serum protein electrophoresis
	X-ray of vertebral column and skull
	Biopsy of skin, rectal mucosa, or abdominal fat
	Renal biopsy
	Endomyocardial biopsy



Dashboard

Overall score: 0%

1 -

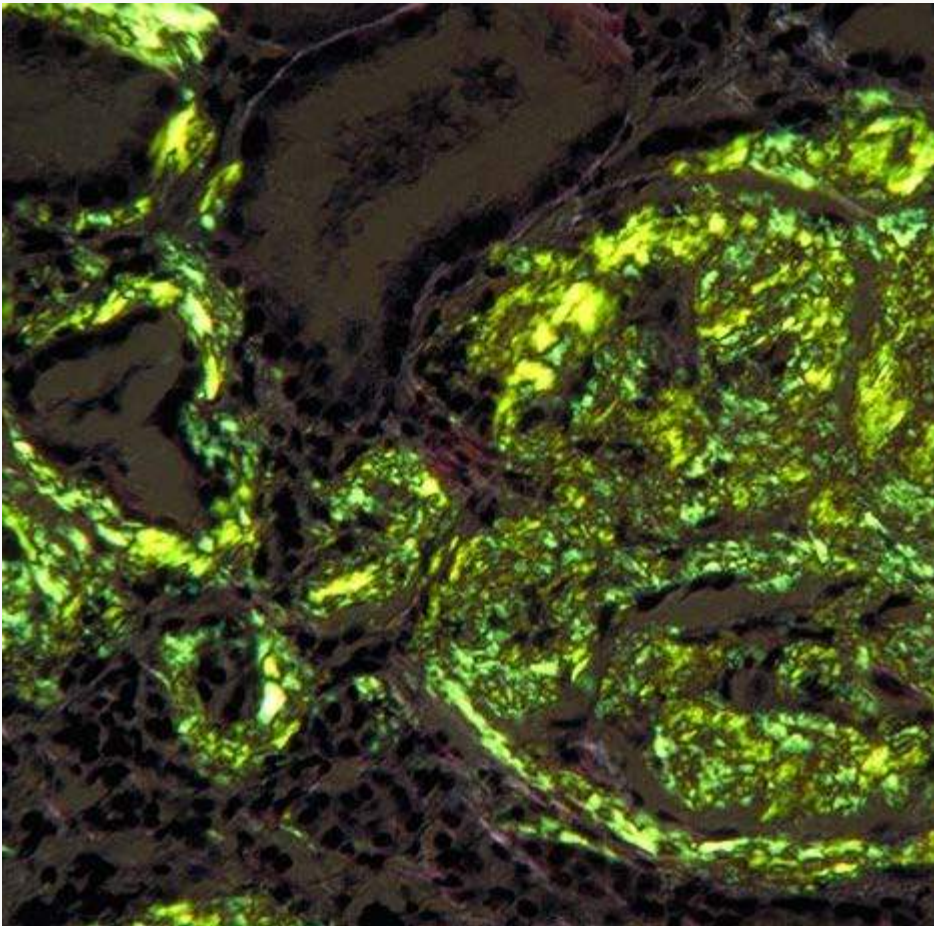
Question 56 of 144

A 55-year-old woman with a background of long-standing rheumatoid arthritis, chronic weight loss, diarrhoea, and leg swelling. Additionally, she has a painless, enlarged thumb and first two digits, which bothers her at times.

On examination she has waxy skin plaques above the ankles, and peripheral neuropathy. The faecal occult blood test is positive. The faecal calprotectin is 150 µg/g. Urinalysis shows proteinuria (3+).

Which of the following is the most appropriate next step in management?

<input type="radio"/>	Serum protein electrophoresis
<input type="radio"/>	X-ray of vertebral column and skull
<input checked="" type="radio"/>	Biopsy of skin, rectal mucosa, or abdominal fat
<input type="radio"/>	Renal biopsy
<input type="radio"/>	Endomyocardial biopsy



Dashboard

Overall score: 0%

1 -

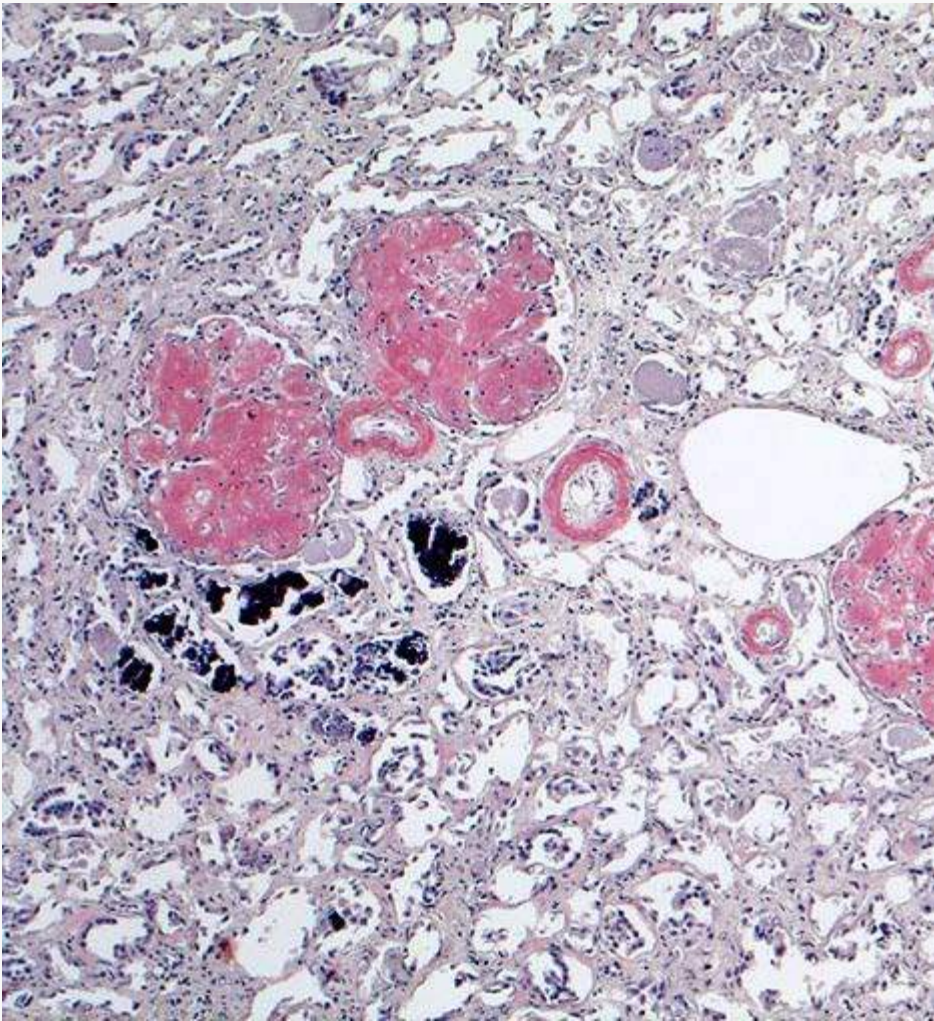
Question 56 of 144

A 55-year-old woman with a background of long-standing rheumatoid arthritis, weight loss, diarrhoea, and leg swelling. Additionally, she has pain in her thumb and first two digits, which bothers her at night.

On examination she has waxy skin plaques above her ankles, and peripheral neuropathy. The faecal occult blood test is positive. Urinalysis shows proteinuria.

Which of the following is the most appropriate next step in her management?

	Serum protein electrophoresis
	X-ray of vertebral column and skull
	Biopsy of skin, rectal mucosa, or abdominal fat
	Renal biopsy
	Endomyocardial biopsy



Dashboard

Overall score: 0%

1 -

Question 57 of 144



A 38 year-old man presented to his GP with weakness and arthralgia. He had a past history of liver cirrhosis secondary to hepatitis C virus infection which was contracted 10 years ago, however he had failed to attend any clinic appointments over the past 18 months.

On examination, his pulse was 85 beats per minute and his blood pressure was 140/80 mmHg. There was a purpuric rash affecting his lower limbs. Urinalysis showed blood 2+ and protein 2+.

Hb	128 g/l
Platelets	$577 \times 10^9/l$
WBC	$10.9 \times 10^9/l$

Na ⁺	137 mmol/l
K ⁺	4.1 mmol/l
Urea	7.3 mmol/l
Creatinine	186 μ mol/l

What is the most important diagnostic investigation?

<input type="checkbox"/>	Antinuclear antibodies
<input type="checkbox"/>	Anti glomerular basement membrane antibodies
<input type="checkbox"/>	Anti-neutrophil cytoplasmic antibodies
<input type="checkbox"/>	Serum cryoglobulins
<input type="checkbox"/>	Antistreptolysin O titre

Dashboard

Overall score: **0%**

1 -

Question 57 of 144



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WBC	$10.9 \times 10^9/l$

Na ⁺	137 mmol/l
K ⁺	4.1 mmol/l
Urea	7.3 mmol/l
Creatinine	186 μ mol/l

What is the most important diagnostic investigation?

	Antinuclear antibodies
	Anti glomerular basement membrane antibodies
	Anti-neutrophil cytoplasmic antibodies
	Serum cryoglobulins
	Antistreptolysin O titre

Dashboard

Overall score: **0%**

1 -

□ Question 58 of 144



A 64-year-old male Jehovah's witness was brought into hospital two days ago by his wife after increasing generalised fatigue and malaise over the past 4 weeks. Today, he has been unable to get out of bed. His past medical history includes stage 5 chronic kidney disease, hypertension and type 2 diabetes. He continues to pass urine without renal replacement therapy with a baseline creatinine of 260 $\mu\text{mol/l}$. On examination, he is warm peripherally with conjunctival pallor. His heart sounds are unremarkable, the chest is clear and abdomen soft and non-tender. He has passed 800mls of urine in the last 24 hours. His blood tests are as follows:

Hb	80 g/l
Platelets	$201 \times 10^9/\text{l}$
WBC	$6.7 \times 10^9/\text{l}$
Ferritin	4 ng/ml
Transferrin saturation	19%

Na^+	145 mmol/l
K^+	4.9 mmol/l
Urea	17.7 mmol/l
Creatinine	276 $\mu\text{mol/l}$

What is the most appropriate management?

	Intravenous blood transfusion
	Haemofiltration
	Intravenous iron supplement
	Intravenous erythropoietin

Dashboard

Overall score: **0%**

1 -

Question 58 of 144



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Urea	17.7 mmol/l
Creatinine	276 $\mu\text{mol/l}$

What is the most appropriate management?

	Intravenous blood transfusion
	Haemofiltration
	Intravenous iron supplement
	Intravenous erythropoietin

Dashboard

Overall score: **0%**

1 -

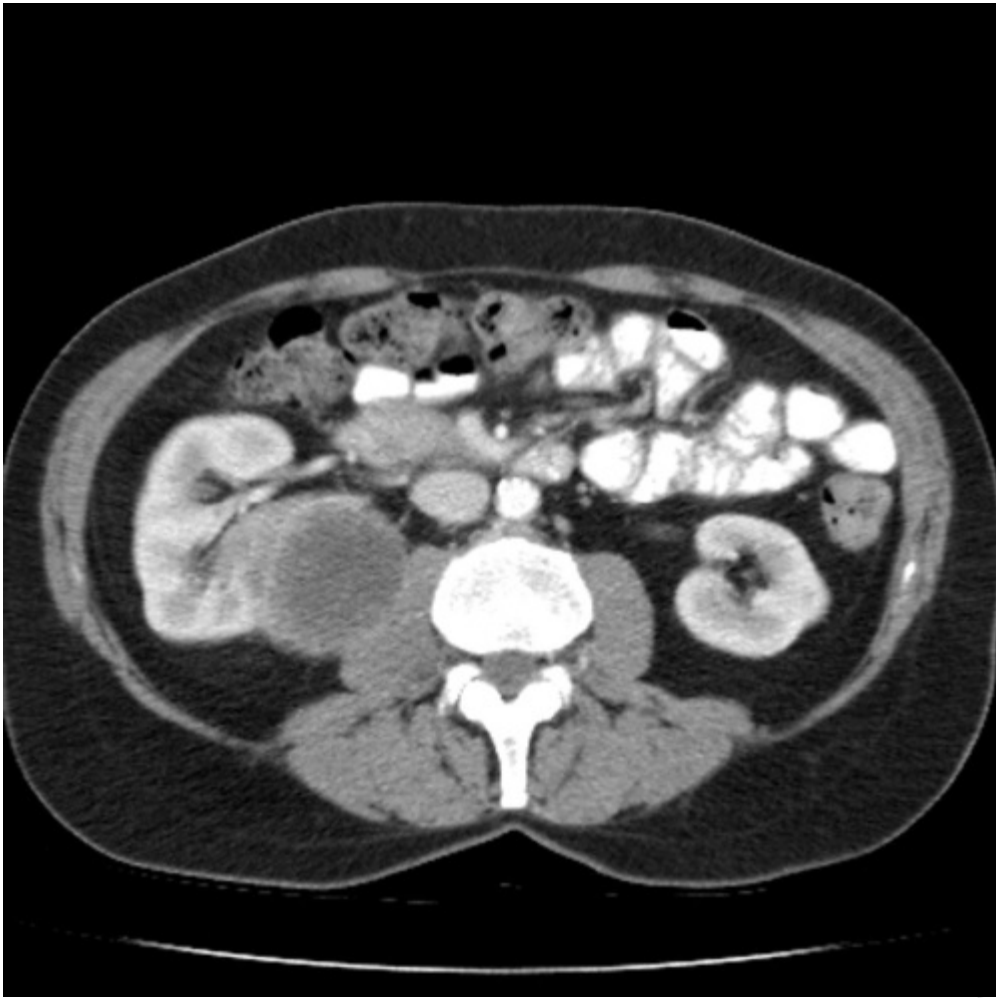
□ Question 59 of 144

□ □

A 65-year-old woman is investigated for intermittent visible haematuria. Her symptoms have been present for around 6 weeks and are associated with a dull ache in the right loin area. Her past medical history includes depression, hypertension and lower back pain. She has no history of urinary problems other than recurrent bouts of 'cystitis'. Blood tests show the following:

Hb	12.2 g/dl	Na ⁺	142 mmol/l
Platelets	389 * 10 ⁹ /l	K ⁺	3.9 mmol/l
WBC	8.2 * 10 ⁹ /l	Urea	6.5 mmol/l
		Creatinine	90 µmol/l
		CRP	14 mg/l

A CT is requested:



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What is the most likely diagnosis?

	Chronic pyelonephritis with abscess formation
	Wilm's tumour
	Renal cyst
	Autosomal dominant polycystic kidney disease
	Renal cell cancer

Dashboard

Overall score: 0%

1 -

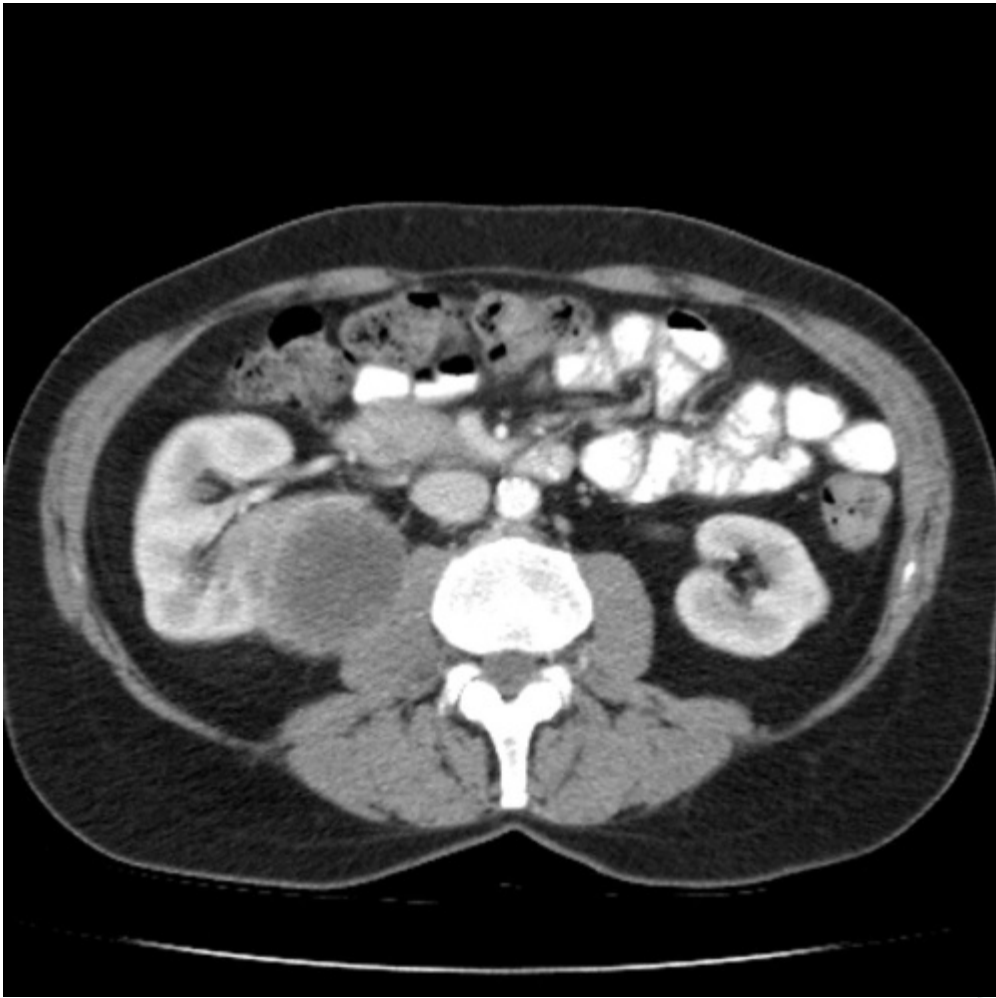
□ Question 59 of 144

□ □

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Dashboard

Overall score: **0%**

1 -

□ Question 59 of 144

□ □

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A CT is requested:



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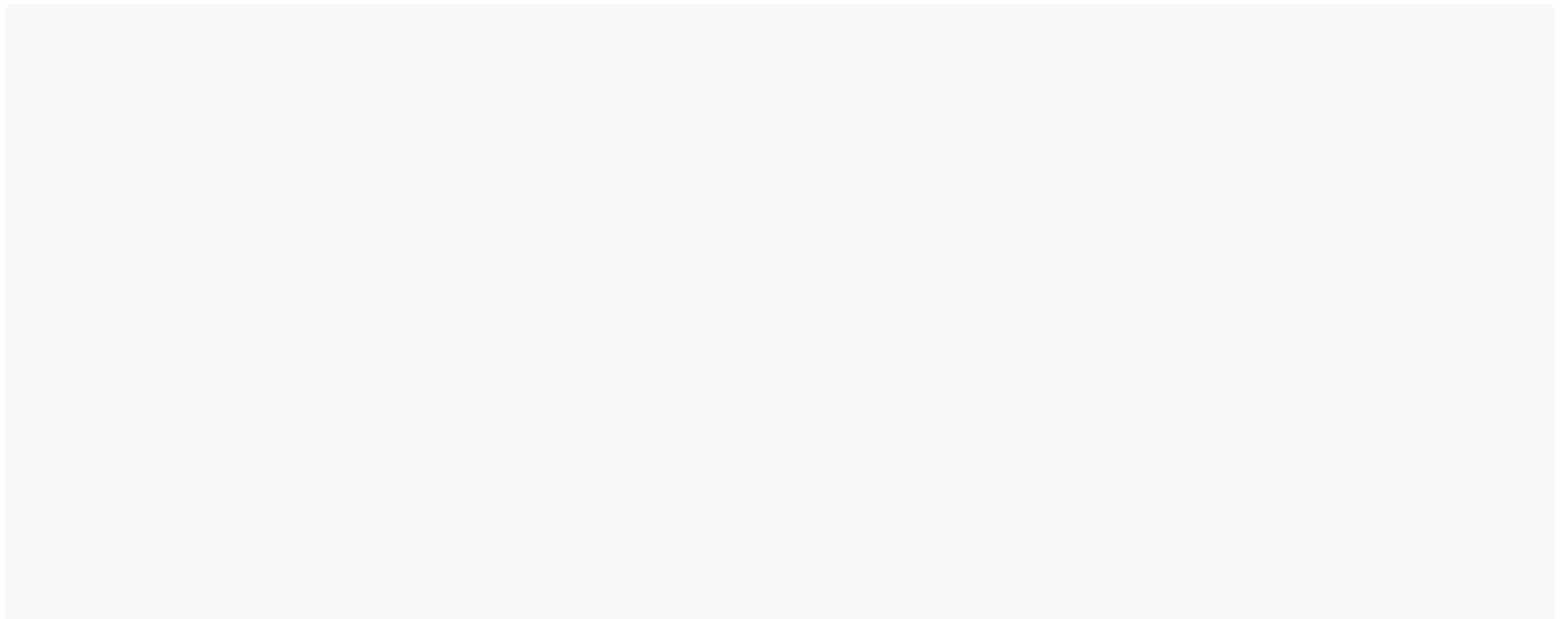
What is the most likely diagnosis?

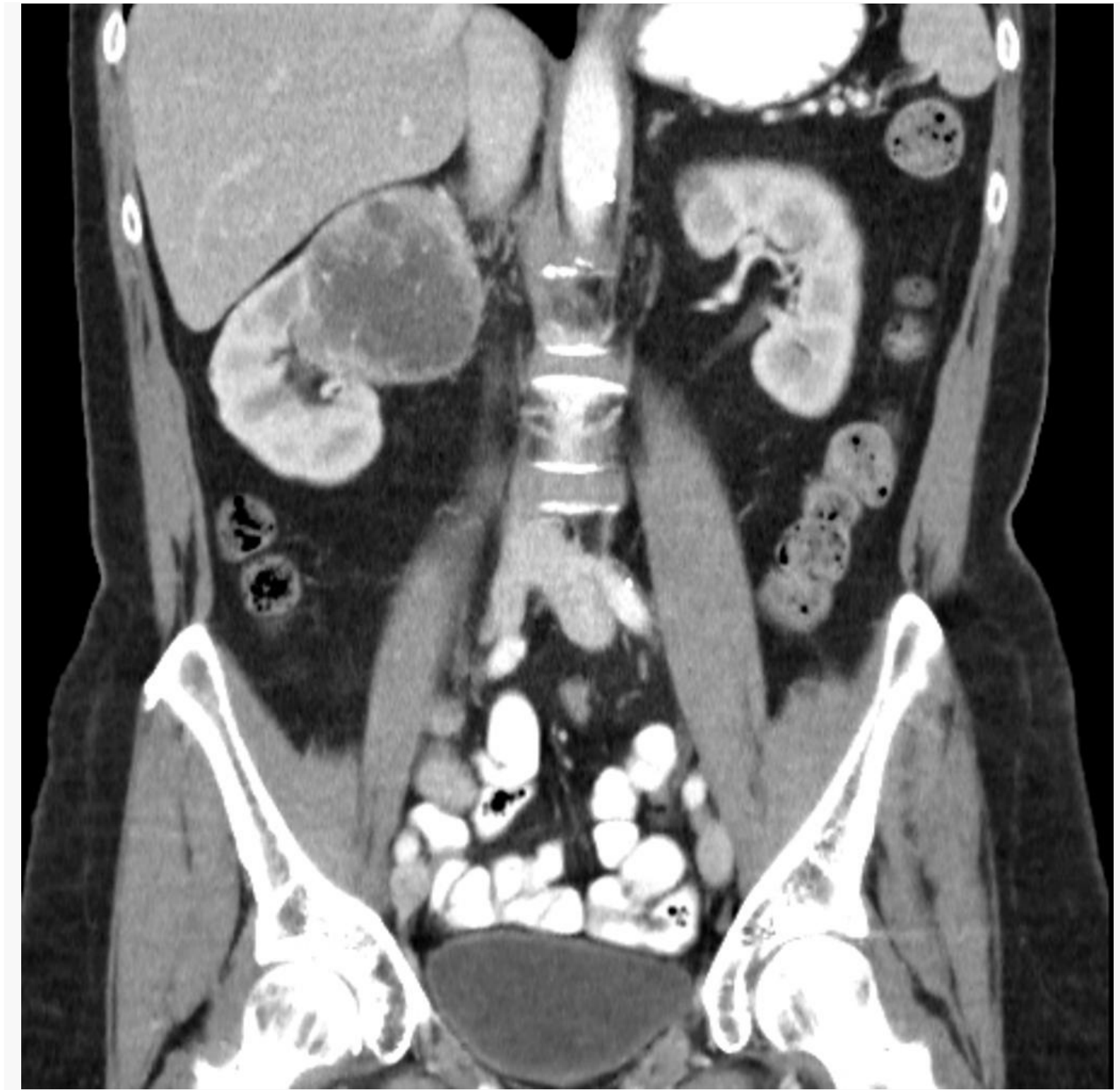
	Chronic pyelonephritis with abscess formation
	Wilm's tumour
	Renal cyst
	Autosomal dominant polycystic kidney disease
	Renal cell cancer

Dashboard

Overall score: **0%**

1 -





□ Question 59 of 144

□ □

A 65-year-old woman is investigated for intermittent visible haematuria. Her symptoms have been present for around 6 weeks and are associated with a dull ache in the right loin area. Her past medical history includes depression, hypertension and lower back pain. She has no history of urinary problems other than recurrent bouts of 'cystitis'. Blood tests show the following:

Hb	12.2 g/dl	Na ⁺	142 mmol/l
Platelets	389 * 10 ⁹ /l	K ⁺	3.9 mmol/l
WBC	8.2 * 10 ⁹ /l	Urea	6.5 mmol/l
		Creatinine	90 µmol/l
		CRP	14 mg/l

A CT is requested:



© Image used on license from Radiopaedia



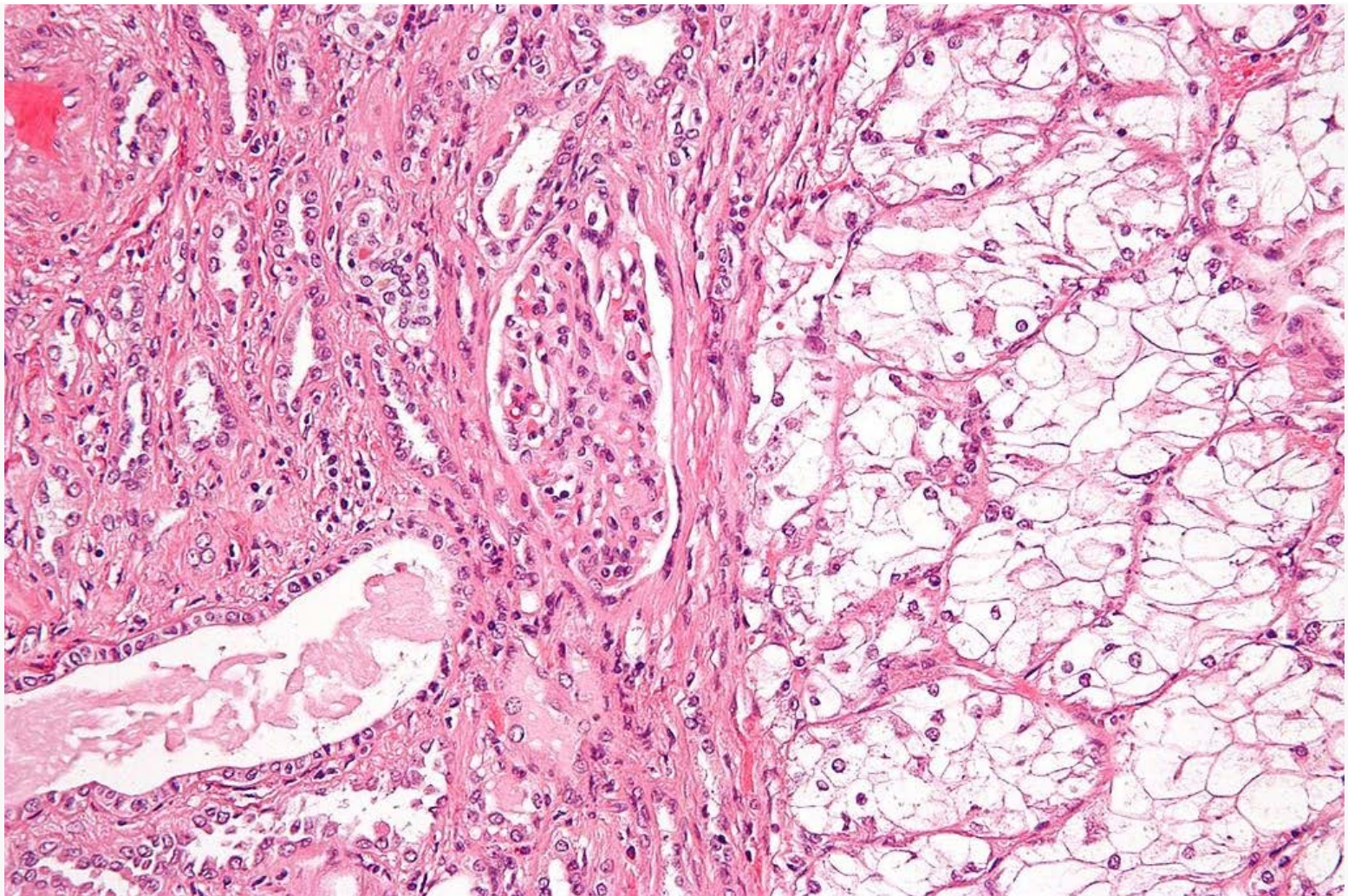
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Dashboard

Overall score: 0%

1 -

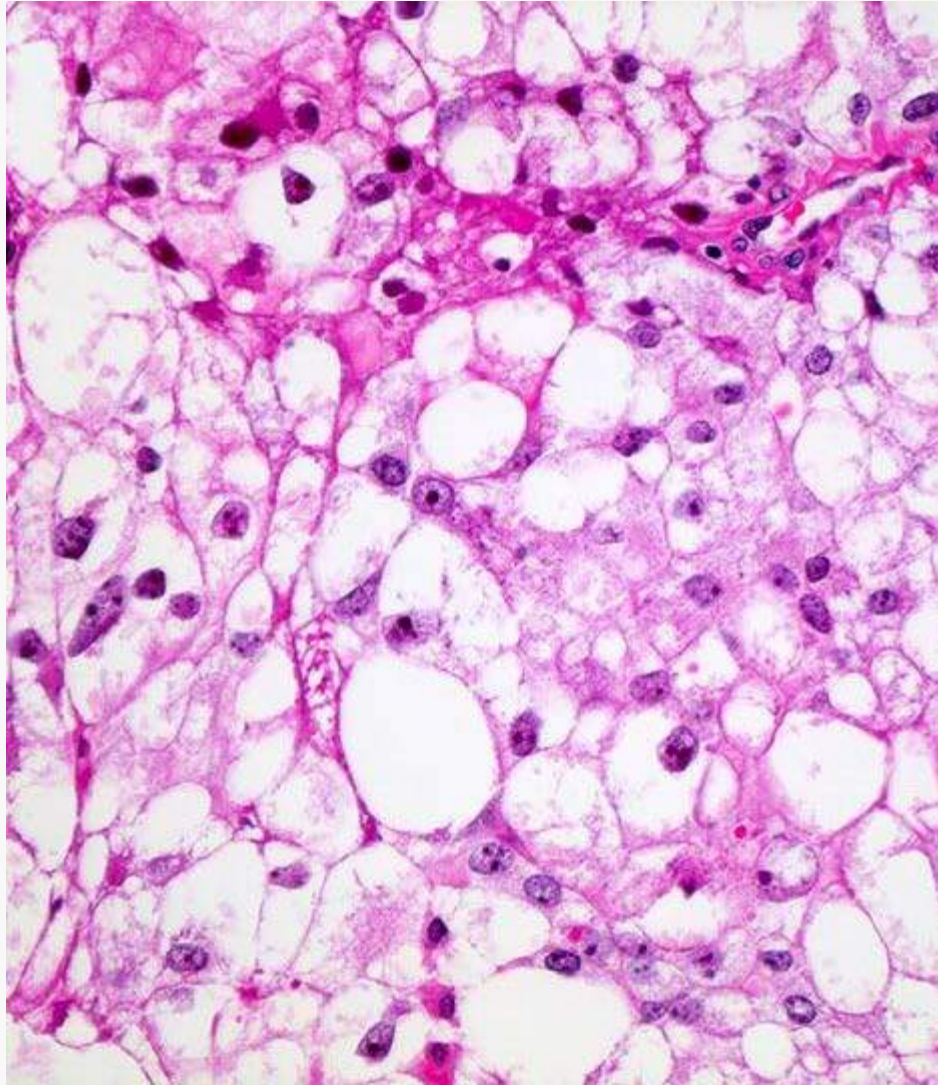


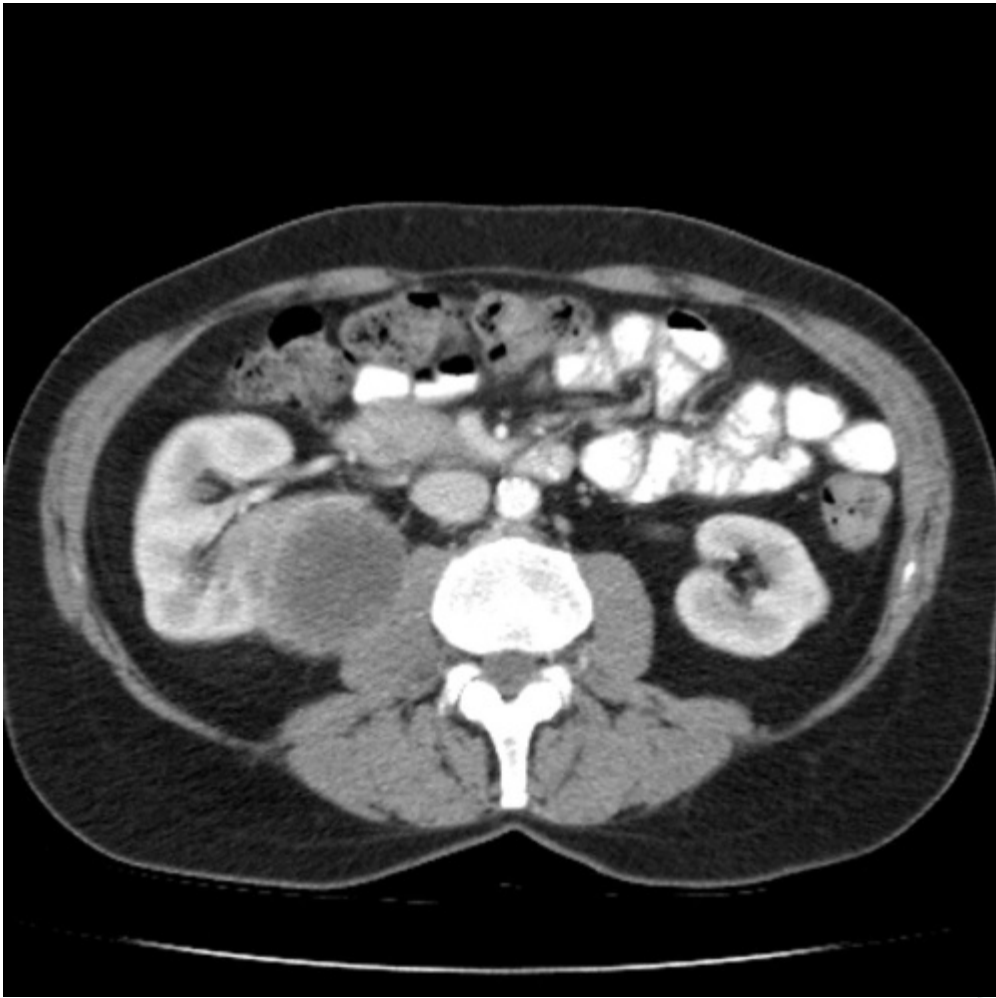
Question 59 of 144

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© Image used on license from Radiopaedia



What is the most likely diagnosis?

	Chronic pyelonephritis with abscess formation
	Wilm's tumour
	Renal cyst
	Autosomal dominant polycystic kidney disease
	Renal cell cancer

Dashboard

Overall score: **0%**

1 -

□ Question 60 of 144



A 58-year-old lady with an extensive psychiatric history presents to the Acute Medical unit unwell and dehydrated. She recently had a viral illness and has spent most of the past week in bed. She is mildly confused on arrival and the ambulance sheet states that for the past two weeks she has been passing urine more frequently, particularly at night. She denies any dysuria or fevers.

She has a history of bipolar affective disorder which is currently stable on lithium. She also has a history of irritable bowel syndrome, hypertension, hypercholesterolaemia and migraines. She currently takes amlodipine 10mg once a day, simvastatin 20mg at night, mebeverine 135mg three times a day and lithium carbonate 800mg at night. She has no known drug allergies.

On examination, she looks unwell and dehydrated. Her pulse is 105 bpm and regular, blood pressure 95/65 mmHg, saturations of 98% on air. Numerous linear scars are apparent on both her arms and the tops of her thighs. Her mucous membranes are dry and her JVP is not visible at 45 degrees. Her chest was clear. Abdominal examination demonstrated a soft, non-tender abdomen with no masses or organomegaly and normal bowel sounds.

A set of bloods come back as follows:

Na ⁺	153 mmol/L
K ⁺	4.9 mmol/L
Urea	8 mmol/L
Creatinine	110 µmol/L
Hb	160 g/L
WBC	$6.0 \times 10^9/L$
LFTs	Normal
Urine osmolality	180 mOsmol/kg

Chest x-ray shows clear lung fields.

Considering the most likely diagnosis which of the following treatments are most likely to treat the underlying condition?

	Hypertonic saline resuscitation
	Low dose DDAVP
	Observation
	Thiazide diuretic and amiloride
	1.5L fluid restriction

Dashboard

Overall score: **0%**

1 -

□ Question 60 of 144



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	Observation
	Thiazide diuretic and amiloride
	1.5L fluid restriction

Dashboard

Overall score: **0%**

1 -

Question 61 of 144

□ □

A 62 year-old woman is referred by her GP following routine blood tests. She was otherwise fit and well and on no regular medications.

On examination, her blood pressure was 130/75 mmHg. Abdominal examination was normal. Urine dipstick showed protein 2+ and blood 2+.

Hb	146 g/l
Platelets	$192 \times 10^9/l$
WBC	$7.1 \times 10^9/l$

Na ⁺	138 mmol/l
K ⁺	4.8 mmol/l
Urea	22.5 mmol/l
Creatinine	470 μ mol/l
Anti-Glomerular Basement Membrane antibodies	Positive

What is the most appropriate next step in treatment?

	Rituximab
	Intravenous immunoglobulins
	Plasmapheresis only
	Prednisolone + Cyclophosphamide + Plasmapheresis
	Prednisolone only

Dashboard

Overall score: **0%**

1 -

Question 61 of 144



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What is the most appropriate next step in treatment?

	Rituximab
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	Plasmapheresis only
	Prednisolone + Cyclophosphamide + Plasmapheresis
	Prednisolone only

Dashboard

Overall score: **0%**

1 -

□ Question 62 of 144

□ □

You are the medical doctor on an acute medical unit. A 28 year old, adopted female with a history of recurrent kidney stones has been referred by her GP with hypokalaemia (K^+ 2.6 mmol/l). She feels well in herself and denies any vomiting or diarrhoea. Her observations are normal and blood results are as below:

Na^+	141 mmol/l
K^+	2.6 mmol/l
Bicarbonate	18 mmol/l
Urea	5.0 mmol/l
Creatinine	67 μ mol/l
Anion gap	13 mEq/L

What is the most likely cause of her presentation?

	Liquorice poisoning
	Renal tubular acidosis type 1
	Renal tubular acidosis type 2
	Renal tubular acidosis type 3
	Renal tubular acidosis type 4

Dashboard

Overall score: 0%

1 -

□ Question 62 of 144

□ □

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	Renal tubular acidosis type 4

Dashboard

Overall score: **0%****1** -

Question 63 of 144

□ □

A 50 year-old lady presented with generalised oedema and shortness of breath. Urinalysis revealed nephrotic range proteinuria. A clinical diagnosis of nephrotic syndrome was made.

Which of the following conditions is most commonly associated with nephrotic syndrome?

	IgA nephropathy
	Membranous nephropathy
	Post-infectious glomerulonephritis
	Acute interstitial nephritis
	Wegener's granulomatosis

Dashboard

Overall score: 0%

1 -

Question 63 of 144

□ □

A 50 year-old lady presented with generalised oedema and shortness of breath. Urinalysis revealed nephrotic range proteinuria. A clinical diagnosis of nephrotic syndrome was made.

Which of the following conditions is most commonly associated with nephrotic syndrome?

	IgA nephropathy
	Membranous nephropathy
	Post-infectious glomerulonephritis
	Acute interstitial nephritis
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Dashboard

Overall score: **0%**

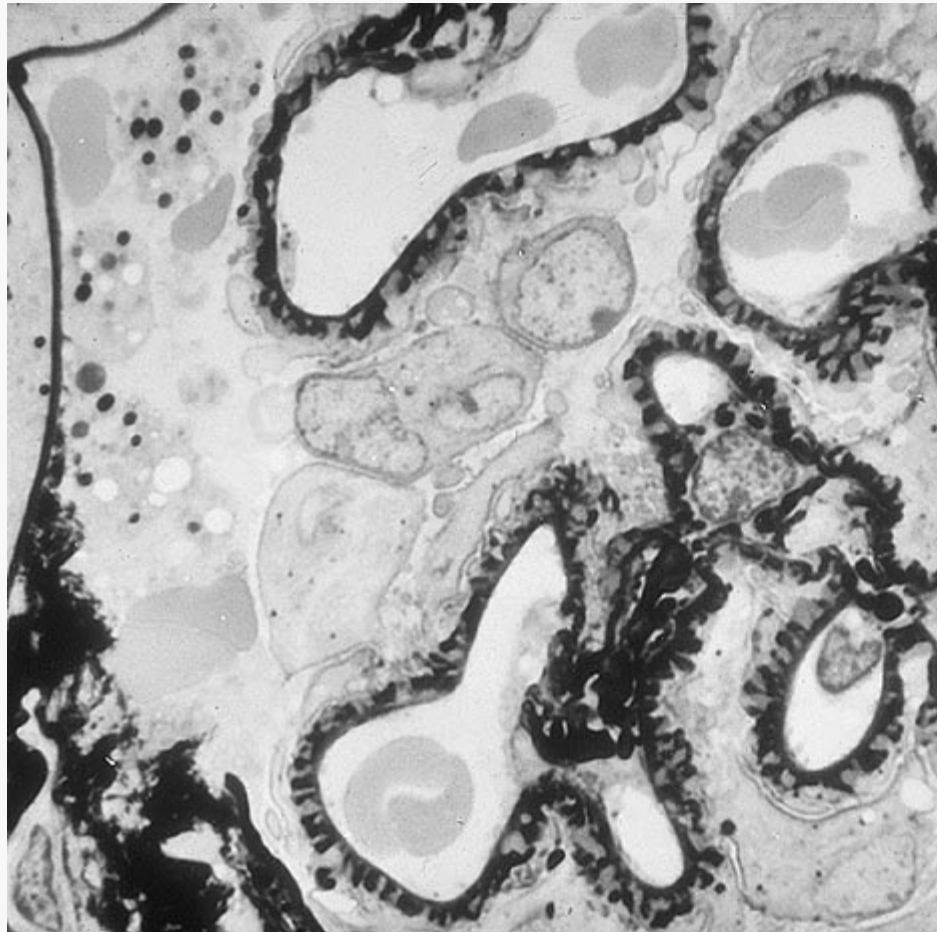
1 -

Question 63 of 144

A 50 year-old lady presented with generalised oedema and proteinuria. A clinical diagnosis of nephrotic syndrome was made.

Which of the following conditions is most common in this patient?

<input type="radio"/>	IgA nephropathy
<input checked="" type="radio"/>	Membranous nephropathy
<input type="radio"/>	Post-infectious glomerulonephritis
<input type="radio"/>	Acute interstitial nephritis
<input type="radio"/>	Wegener's granulomatosis



Dashboard

Overall score: **0%**

1 -

□ Question 64 of 144



A 56-year-old gentleman was admitted to the Emergency Department with a two-week history of progressively increasing shortness of breath, with frank haemoptysis for the last couple of days. He had recently returned from a holiday in Turkey a few weeks ago. By the point of admission, he was short of breath on minimal exertion and at rest and was unable to complete full sentences. He also complained of increasing orthopnoea for the last few weeks. He had a long history of recurrent epistaxis, rhinitis and sinusitis, as well as a past medical history of diabetes, hypertension, hypercholesterolaemia and gout. His medication regimen comprised of mometasone nasal spray, allopurinol 100mg OD, ramipril 2.5 mg OD, amlodipine 5mg OD, simvastatin 40mg OD, metformin 500mg TDS and gliclazide 80mg OD. He smoked 20 cigarettes per day and did not consume alcohol.

On examination, he appeared very unwell with obvious respiratory distress. His respiratory rate was 28/min, his oxygen saturations were 90% on air, his blood pressure was 108/72 mmHg, his heart rate was 129 and his temperature was 37.9 degrees celsius. Examination of his cardiovascular system revealed normal heart sounds with a JVP of 3cm. Examination of the respiratory system revealed the use of accessory muscles with bibasal fine crackles. Examination of the gastrointestinal and neurological systems was unremarkable.

Initial investigations revealed the following:

Hb	82 g/l
Platelets	$342 \times 10^9/l$
WBC	$14.2 \times 10^9/l$
ESR	88 mm/hr

Na ⁺	128 mmol/l
K ⁺	6.1 mmol/l
Urea	28 mmol/l
Creatinine	762 μ mol/l
CRP	42 mg/l
Glucose	5.6 mmol/l

Chest x-ray: bilateral patchy infiltration
ECG: heart rate 132 bpm normal sinus rhythm, no other changes
Urinalysis blood ++++ protein +++ leuc/nit negative glucose negative

ABG on 15 l/min oxygen:

PaO2	16.9 kPa
PaCO2	2.8 kPa
HCO3	18.2 mmol/l
pH	7.49

He was catheterized, commenced on an intravenous infusion of normal saline, as well as co-amoxiclav 625mg TDS and quickly transferred to the Intensive Care Unit. A decision was made to institute immediate haemodialysis, for which preparations were being made.

Further investigations revealed the following:

Urine MCS: nil grown
Blood culture - interim results: nil grown

Transoesophageal echocardiogram: normal systolic function, valvular appearances and no vegetations seen

C3	1.22 (NR 0.65 1.65g/L)
C4	0.32 (NR 0.16 0.60 g/L)
ANA	negative
ENA	negative
dsDNA	negative
cANCA	positive
pANCA	negative
Rheumatoid factor	negative

Given the likely underlying diagnosis, which of the following interventions is the next best step whilst awaiting haemodialysis?

	Stop IV augmentin, commence IV meropenem
	Commence IV immunoglobulins
	Commence high dose IV methylprednisolone and cyclophosphamide

	Institute immediate plasma exchange
	Commence intravenous activated protein C

Dashboard

Overall score: **0%**

1 -

□ Question 64 of 144



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Dashboard

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1 -

Question 64 of 144

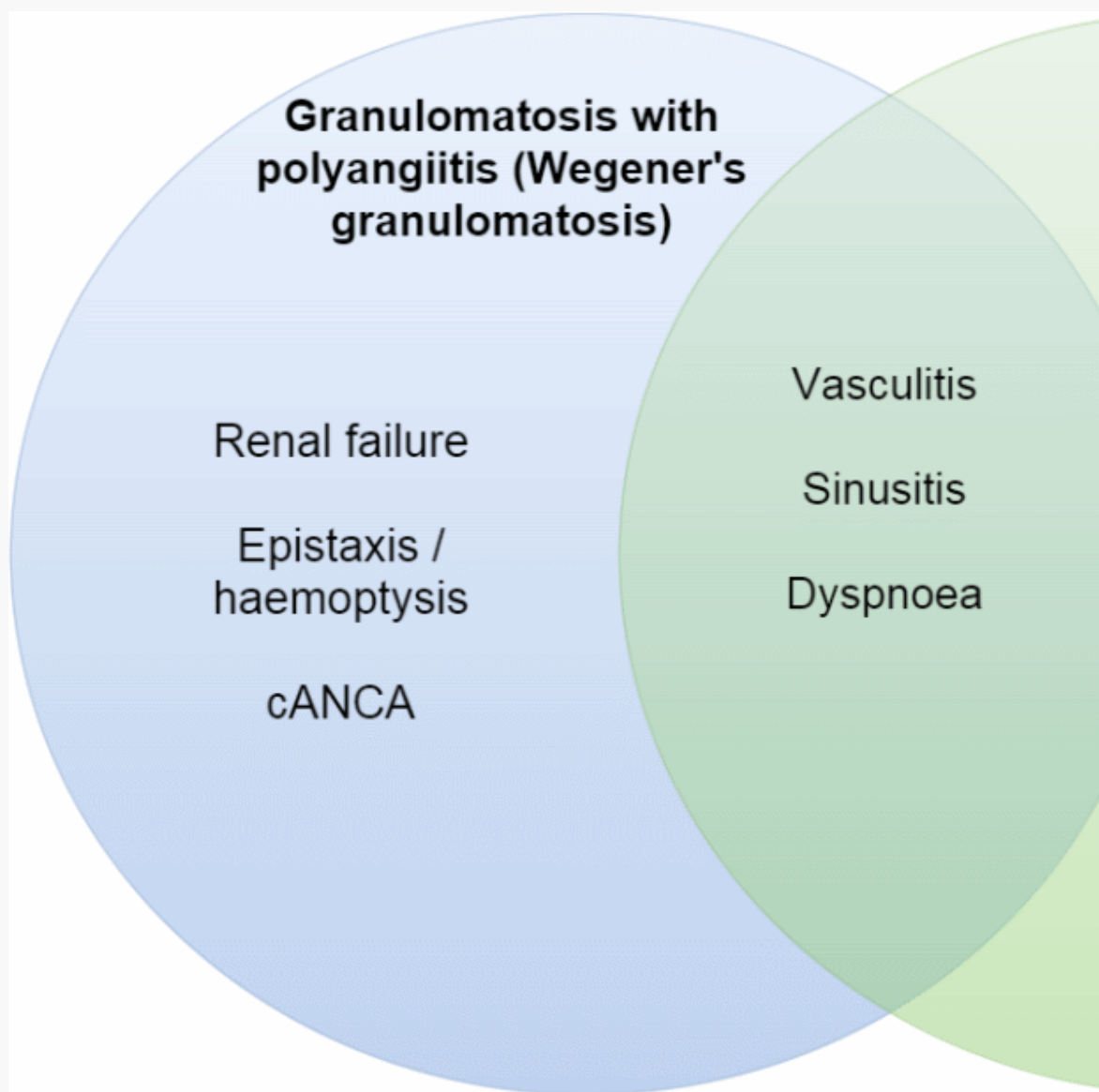
A 56-year-old gentleman was brought to hospital with shortness of breath, with fraenum linguae, and a recent visit to Turkey a few weeks ago. By the time he was brought to hospital, he was unable to complete full sentences. He has a long history of recurrent epistaxis, hypercholesterolaemia and hypertension. He is on ramipril 2.5 mg OD, amlodipine 5 mg OD and has smoked 20 cigarettes per day for 30 years.

On examination, he appeared unwell. His oxygen saturations were 90% on air. His temperature was 37.9 degrees celsius. Examination of the respiratory system was normal. Examination of the gastrointestinal and neurological systems was normal.

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Dashboard

Overall score: **0%**

1 -

□ Question 64 of 144

□ □

A 56-year-old gentleman was admitted to the Emergency Department with a two-week history of progressively increasing shortness of breath, with frank haemoptysis for the last couple of days. He had recently returned from a holiday in Turkey a few weeks ago. By the point of admission, he was short of breath on minimal exertion and at rest and was unable to complete full sentences. He also complained of increasing orthopnoea for the last few weeks. He had a long history of recurrent epistaxis, rhinitis and sinusitis, as well as a past medical history of diabetes, hypertension, hypercholesterolaemia and gout. His medication regimen comprised of mometasone nasal spray, allopurinol 100mg OD, ramipril 2.5 mg OD, amlodipine 5mg OD, simvastatin 40mg OD, metformin 500mg TDS and gliclazide 80mg OD. He smoked 20 cigarettes per day and did not consume alcohol.

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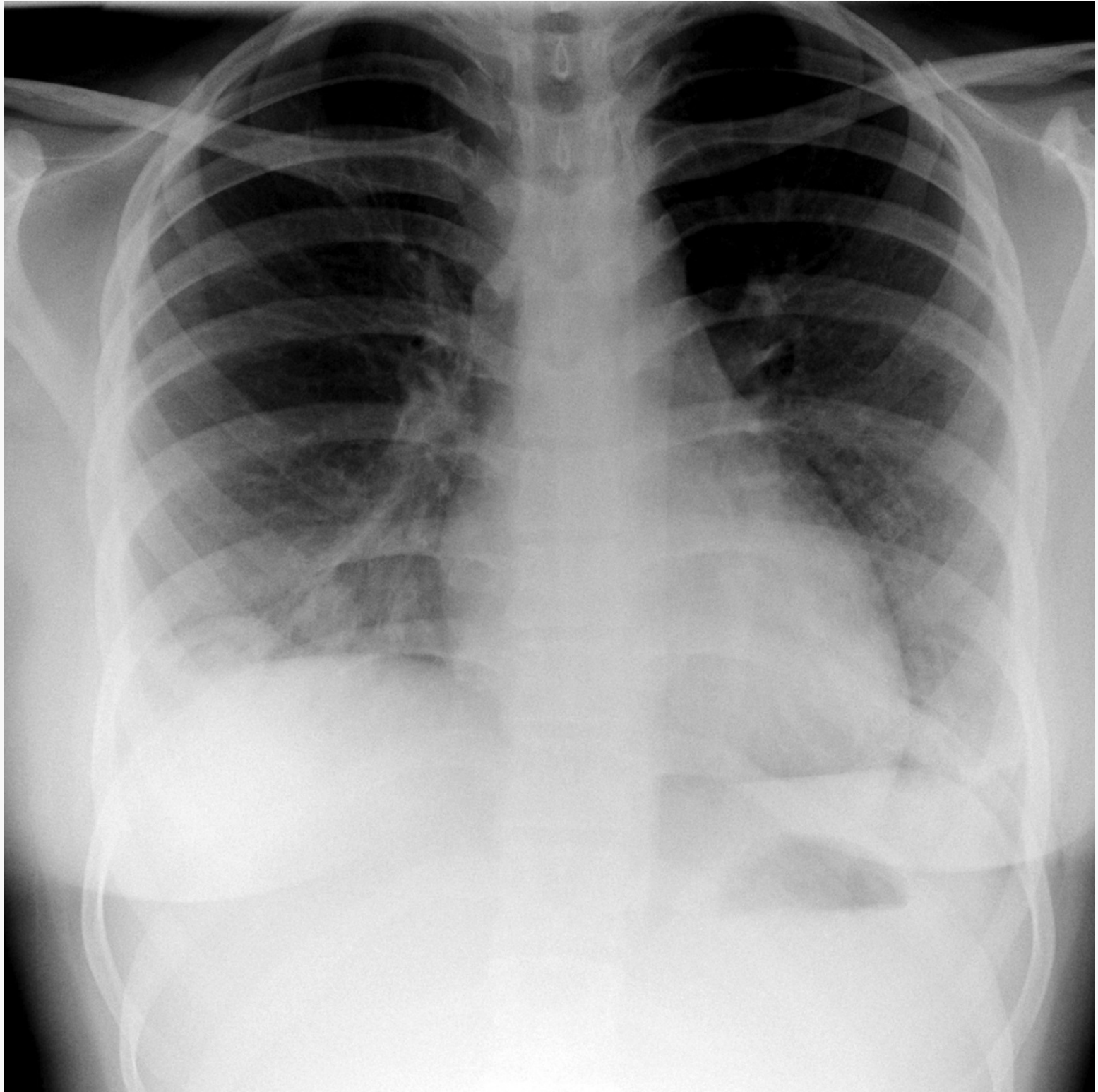
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1 -



□ Question 64 of 144

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	Commence high dose IV methylprednisolone and cyclophosphamide
	Institute immediate plasma exchange
	Commence intravenous activated protein C

Overall score: 0%

1 -



Question 65 of 144

□ □

A 77-year-old man has been admitted with an ischaemic right limb and the vascular surgical team would like to perform a CT with contrast to investigate. He has a history of diabetes and heart failure. His blood tests are shown below

Hb	135 g/l
Platelets	$270 \times 10^9/l$
WBC	$6 \times 10^9/l$

Na ⁺	140 mmol/l
K ⁺	4 mmol/l
Urea	6 mmol/l
Creatinine	140 μ mol/l
eGFR	65 ml/min/1.73m ²

What is the best measure to prevent acute kidney injury in this man?

	N-acetylcysteine pre-scan and post-scan
	Oral volume expansion
	N-acetylcysteine pre-scan
	N-acetylcysteine post-scan
	Intravenous volume expansion

Overall score: **0%**

1 -

Question 65 of 144

□ □

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What is the best measure to prevent acute kidney injury in this man?

	N-acetylcysteine pre-scan and post-scan
	Oral volume expansion
	N-acetylcysteine pre-scan
	N-acetylcysteine post-scan
	Intravenous volume expansion

Overall score: **0%**

1 -

Question 66 of 144

□ □

A 19 year-old man presents with frank haematuria. He had just recovered from a severe cold and states that the symptoms of the cold have now resolved. He took paracetamol for the cold and was not prescribed any antibiotics. His past medical history includes hearing problems from a young age, for which he wears hearing aids and a recent corneal ulcer. His observations are stable and urine dipstick reveals protein ++ and blood +++ in his urine.

It is decided that he will undergo a renal biopsy. What is the most likely finding under light microscopy?

	Nothing
	Rapidly progressive glomerulonephritis
	Membranous nephritis
	Mesangiocapillary glomerulonephritis
	Acute tubular necrosis

Dashboard

Overall score: 0%

1 -

□ Question 66 of 144

□ □

A 19 year-old man presents with frank haematuria. He had just recovered from a severe cold and states that the symptoms of the cold have now resolved. He took paracetamol for the cold and was not prescribed any antibiotics. His past medical history includes hearing problems from a young age, for which he wears hearing aids and a recent corneal ulcer. His observations are stable and urine dipstick reveals protein ++ and blood +++ in his urine.

It is decided that he will undergo a renal biopsy. What is the most likely finding under light microscopy?

	Nothing
	Rapidly progressive glomerulonephritis
	Membranous nephritis
	Mesangiocapillary glomerulonephritis
	Acute tubular necrosis

Dashboard

Overall score: **0%**

1 -

Question 67 of 144



A 56-year-old male presents with oliguria, fever and proteinuria eight days after renal transplant. On examination, his abdomen is soft and non-tender, the transplant scar has a mild serous ooze but otherwise clean. A urine dip demonstrates protein 4+ blood 1+, urine output over the past 3 hours have been 27, 20 and 12 ml/ hour respectively. His blood tests are as follows (results from 24 hours ago in brackets)

Hb	99	(98) g/dl
Platelets	190	(185) * 10 ⁹ /l
WBC	3.6	(3.6) * 10 ⁹ /l

Na ⁺	139	(136) mmol/l
K ⁺	4.9	(4.6) mmol/l
Urea	19	(7.8) mmol/l
Creatinine	225	(117) µmol/l

A renal ultrasound demonstrates a normal sized transplanted kidney, no ureteric leak and no hydronephrosis. His tacrolimus levels are within normal range. An urgent renal biopsy of the transplanted kidney demonstrates significant lymphocytic, in particular, mononuclear cell infiltration with no clonal populations, EBV antigen negative and no light chains. His CMV titre is negative, his tacrolimus level is therapeutic. What is the most appropriate immediate management?

<input type="checkbox"/>	IV methylprednisolone
<input type="checkbox"/>	Stop tacrolimus
<input type="checkbox"/>	Increase tacrolimus
<input type="checkbox"/>	Percutaneous nephrostomy insertion
<input type="checkbox"/>	Start ciclosporin

Dashboard

Overall score: **0%**

1 -

Question 67 of 144



A 56-year-old male presents with oliguria, fever and proteinuria eight days after renal transplant. On examination, his abdomen is soft and non-tender, the transplant scar has a mild serous ooze but otherwise clean. A urine dip demonstrates protein 4+ blood 1+, urine output over the past 3 hours have been 27, 20 and 12 ml/ hour respectively. His blood tests are as follows (results from 24 hours ago in brackets)

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	IV methylprednisolone
	Stop tacrolimus
	Increase tacrolimus
	Percutaneous nephrostomy insertion
	Start ciclosporin

Dashboard

Overall score: **0%**

1 -

Question 68 of 144

□ □

A 26-year-old bilateral renal transplant recipient presents with pancytopenia. You work in a busy district general hospital and your consultant asks you to discuss with the renal specialists at your local tertiary centre for advice.

Hb	95 g/l
Platelets	$20 \times 10^9/l$
WBC	$1.2 \times 10^9/l$

Which one of the following medications is known to cause pancytopenia?

	Mycophenolate
	Co-trimoxazole
	Tacrolimus
	Omeprazole
	Chloramphenicol 0.5% eye drops

Dashboard

Overall score: **0%**

1 -

Question 68 of 144

□ □

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<input type="checkbox"/>	Co-trimoxazole
<input type="checkbox"/>	Tacrolimus
<input type="checkbox"/>	Omeprazole
<input type="checkbox"/>	Chloramphenicol 0.5% eye drops

Dashboard

Overall score: **0%**

1 -

Question 69 of 144

□ □

A 56-year-old man with long-standing hypertension medicated with enalapril and diuretics presents with right flank pain. Temperature is 37.2°C, blood pressure is 145/95 mmHg.

On examination: Tenderness in right costovertebral angle and bilaterally enlarged kidneys. Urine dip-stick noted micro-haematuria.

Which of the following is the most appropriate next step in diagnosis?

	Cytological examination of urine
	Ultrasonography
	CT scan of the abdomen
	Intravenous pyelography (IVP)
	Renal biopsy

Dashboard

Overall score: 0%

1 -

Question 69 of 144

□ □

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	Ultrasonography
	CT scan of the abdomen
	Intravenous pyelography (IVP)
	Renal biopsy

Dashboard

Overall score: **0%**

1 -

□ Question 69 of 144

□ □

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	Renal biopsy

Dashboard

Overall score: **0%**

1 -



□ Question 69 of 144

□ □

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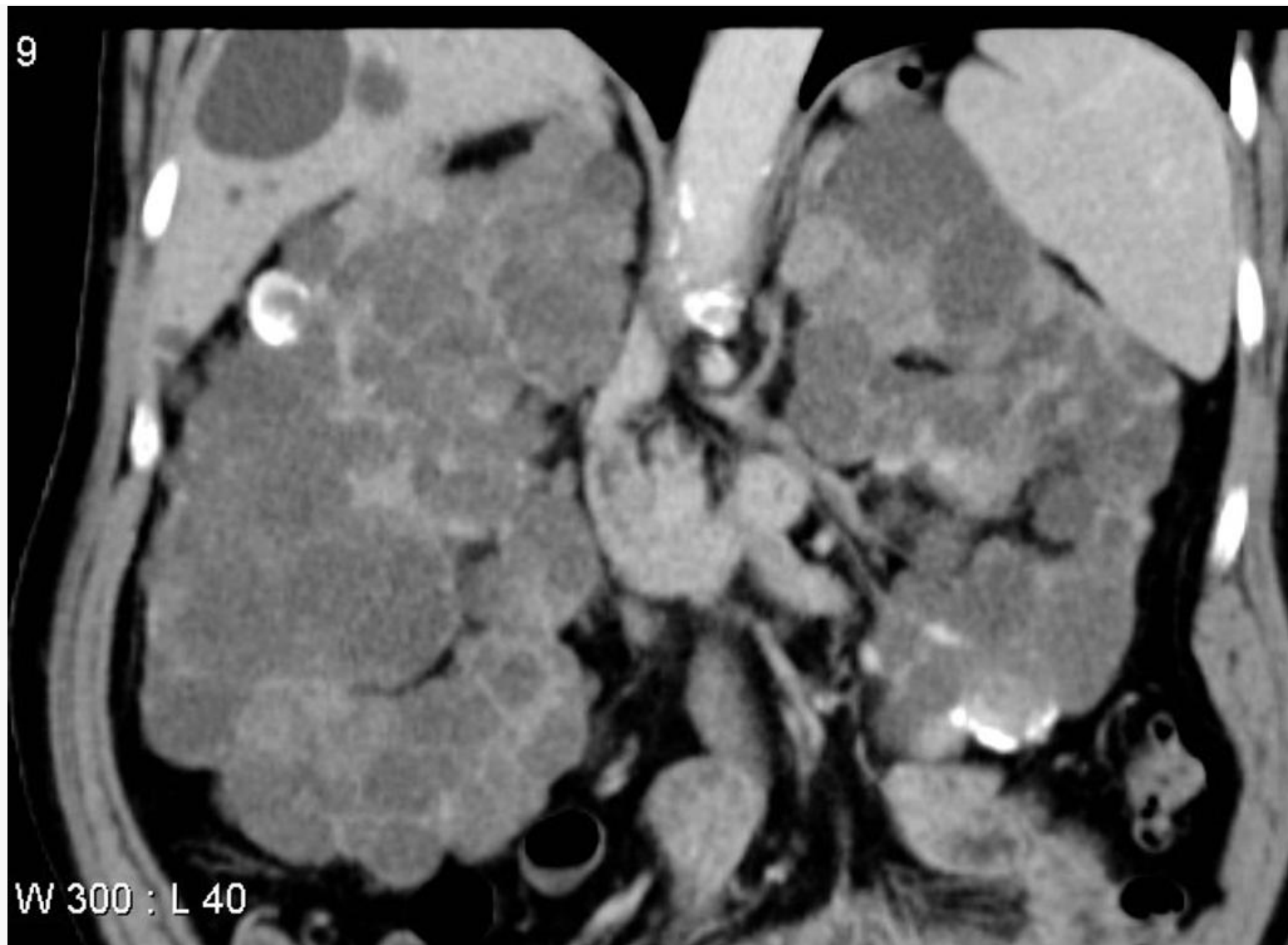
Dashboard

Overall score: 0%

1 -

9

W 300 : L 40



□ Question 69 of 144

□ □

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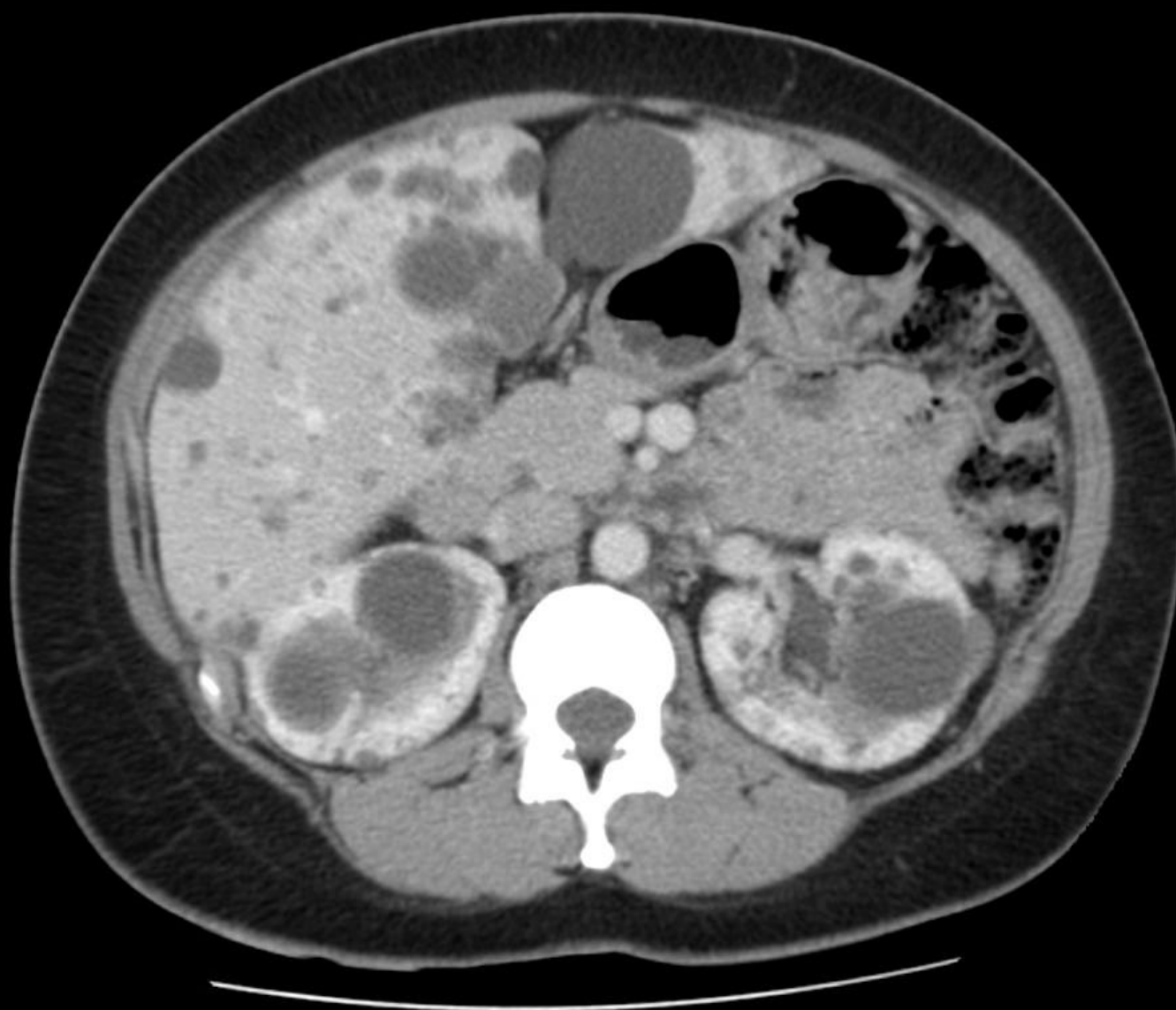
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	Cytological examination of urine
	Ultrasonography
	CT scan of the abdomen
	Intravenous pyelography (IVP)
	Renal biopsy

Dashboard

Overall score: 0%

1 -



□ Question 70 of 144

□ □

A 52-year-old man is referred to the Emergency Department by his General Practitioner with the following renal profile:

Na ⁺	140 mmol/l
K ⁺	3.4 mmol/l
Urea	25.2 mmol/l
Creatinine	380 µmol/l

His past medical history includes neurofibromatosis type 1, hypertension and type 2 diabetes mellitus. While the hypertension and diabetes had previously been controlled with diet alone, this was unsuccessful, and the following medicines were started two weeks ago: amlodipine, irbesartan and metformin.

Urinalysis is negative for blood, protein and nitrites.

What is the likely diagnosis?

	Cushing's syndrome
	Bartter's syndrome
	Polycystic kidney disease
	Acute glomerulonephritis
	Renal artery stenosis

Dashboard

Overall score: 0%

Question 70 of 144

□ □

A 52-year-old man is referred to the Emergency Department by his General Practitioner with the following renal profile:

Na ⁺	140 mmol/l
K ⁺	3.4 mmol/l
Urea	25.2 mmol/l
Creatinine	380 µmol/l

His past medical history includes neurofibromatosis type 1, hypertension and type 2 diabetes mellitus. While the hypertension and diabetes had previously been controlled with diet alone, this was unsuccessful, and the following medicines were started two weeks ago: amlodipine, irbesartan and metformin.

Urinalysis is negative for blood, protein and nitrites.

What is the likely diagnosis?

	Cushing's syndrome
	Bartter's syndrome
	Polycystic kidney disease
	Acute glomerulonephritis
	Renal artery stenosis

Dashboard

Overall score: **0%**

□ Question 71 of 144



A 69-year-old-male attends clinic for review. Today he is complaining of fleeting joint pains and a progressive rash on both legs.

He suffers from chronic back pain but hasn't seen his GP, instead, taking over the counter painkillers for the past six weeks. He has a background of hypertension.

On examination, you are unable to find any evidence of active synovitis. You note a symmetrical eruption of palpable, red-purple papular lesions across the extensor surfaces of both legs. He has vesicular breath sounds with oxygen saturations at 99% on room air. His heart sounds are normal, with no murmurs. His clinic blood pressure reading is 146/88 mmHg. His abdomen is soft and non-tender.

Hb	132 g/l	Na ⁺	135 mmol/l
Platelets	155 * 10 ⁹ /l	K ⁺	5.1 mmol/l
WBC	9.9 * 10 ⁹ /l	Urea	7.3 mmol/l
Neuts	5.1 * 10 ⁹ /l	Creatinine	256 µmol/l
Lymphs	1.0 * 10 ⁹ /l	CRP	6 mg/l
Eosin	2.5 * 10 ⁹ /l		

Which of the following is the most likely diagnosis?

	Churg-Strauss syndrome
	Tubulointerstitial nephritis
	Dermatitis herpetiformis
	Hypereosinophilic syndrome
	Cutaneous larva migrans

Dashboard

Overall score: **0%**

1 -

Question 71 of 144



A 69-year-old-male attends clinic for review. Today he is complaining of fleeting joint pains and a progressive rash on both legs.

He suffers from chronic back pain but hasn't seen his GP, instead, taking over the counter painkillers for the past six weeks. He has a background of hypertension.

On examination, you are unable to find any evidence of active synovitis. You note a symmetrical eruption of palpable, red-purple papular lesions across the extensor surfaces of both legs. He has vesicular breath sounds with oxygen saturations at 99% on room air. His heart sounds are normal, with no murmurs. His clinic blood pressure reading is 146/88 mmHg. His abdomen is soft and non-tender.

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	Churg-Strauss syndrome
	Tubulointerstitial nephritis
	Dermatitis herpetiformis
	Hypereosinophilic syndrome
	Cutaneous larva migrans

Dashboard

Overall score: **0%**

1 -

Question 72 of 144

□ □

A 32-year-old woman who has received a renal transplant from an unrelated donor some 4 weeks earlier, comes to the clinic complaining of fevers, arthralgia, abdominal pain and diarrhoea. She had initially made a good recovery after her transplant. Testing for human herpes virus 5 is positive and there has been a rise in CRP and serum creatinine, (values are shown below).

Hb	10.2 g/l	Na ⁺	138 mmol/l
Platelets	203 * 10 ⁹ /l	K ⁺	5.2 mmol/l
WBC	10.9 * 10 ⁹ /l	Urea	9.2 mmol/l
Neuts	8.7 * 10 ⁹ /l	Creatinine	211 µmol/l
Lymphs	2.0 * 10 ⁹ /l	CRP	88 mg/l
Eosin	0.1 * 10 ⁹ /l		

Which of the following is the most appropriate intervention?

	IV acyclovir
	IV ganciclovir
	Oral lamivudine
	Oral valganciclovir
	Oral valaciclovir

Dashboard

Overall score: 0%

□ Question 72 of 144

□ □

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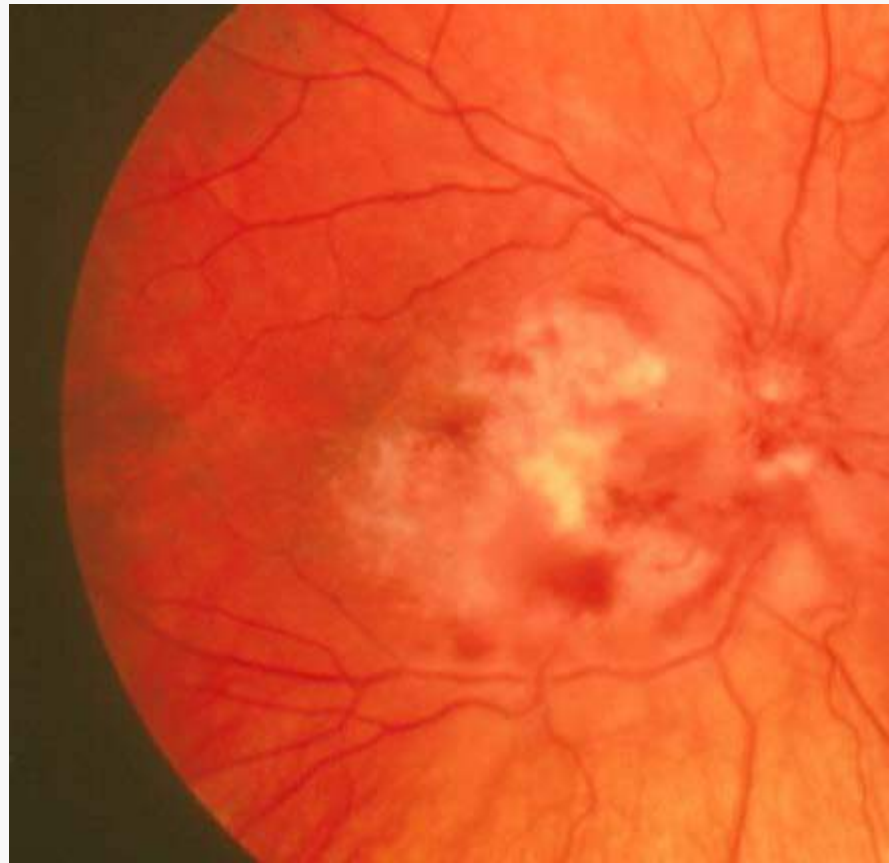
Dashboard

Overall score: 0%

□ Question 72 of 144

A 32-year-old woman who has received a renal transplant complaining of fevers, arthralgia, abdominal pain and a rash (see image below). Testing for human herpes virus 5 is positive (see results shown below).

Hb	10.2 g/l	Na ⁺	138 mmol/l
Platelets	203 * 10 ⁹ /l	K ⁺	5.2 mmol/l
WBC	10.9 * 10 ⁹ /l	Urea	9.2 mmol/l
Neuts	8.7 * 10 ⁹ /l	Creatinine	211 µmol/l
Lymphs	2.0 * 10 ⁹ /l	CRP	88 mg/l
Eosin	0.1 * 10 ⁹ /l		



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	IV acyclovir
	IV ganciclovir
	Oral lamivudine
	Oral valganciclovir
	Oral valaciclovir

Dashboard

Overall score: 0%

□ Question 73 of 144



You are the medical registrar on-call. A 70-year-old male presents to the Emergency Department (ED) with clinical findings consistent with critical limb ischaemia. The patient has a background of diabetes and chronic kidney disease (Stage 4). He is admitted under the vascular surgeons who wish to undertake a CT angiogram. They contact you with the following bloods results:

	Today	1 month ago
Na ⁺	141 mmol/l	138 mmol/l
K ⁺	4.7 mmol/l	4.4 mmol/l
Urea	15.8 mmol/l	9.8 mmol/l
Creatinine	241 µmol/l	158 µmol/l

What evidence-based advice should you give to minimise the risk of contrast-induced nephropathy?

	Oral pre-hydration is superior to intravenous pre-hydration
	Intravenous fluids should be administered with a diuretic
	Intravenous N-acetylcysteine is superior to oral N-acetylcysteine
	Prophylactic haemofiltration should be undertaken post-scan
	Intravenous pre- and post-hydration should only be undertaken with isotonic fluid

[Dashboard](#)

Overall score: 0%

1 -

Question 73 of 144



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Dashboard

Overall score: **0%**

1 -

□ Question 74 of 144



A 62-year-old man is admitted due a three week history of penile swelling. He has a past medical history of colorectal cancer, obesity and asthma. Limited examination demonstrates global pitting oedema and a mild expiratory wheeze. The FY1 prints off his admission blood tests:

Na+	142 mmol/l
K+	3.6 mmol/l
Urea	6.9 mmol/l (Baseline 4.2 mmol/l)
Creatinine	126 µmol/l (Baseline 84 µmol/l)

What is the most likely diagnosis?

	Nephrotic syndrome
	Testicular cancer
	Malnutrition
	Mondor's disease
	Eosinophilic granulomatosis with polyangiitis (Churg-Strauss syndrome)

Dashboard

Overall score: 0%

1 -

Question 74 of 144

□ □

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	Nephrotic syndrome
	Testicular cancer
	Malnutrition
	Mondor's disease
	Eosinophilic granulomatosis with polyangiitis (Churg-Strauss syndrome)

Dashboard

Overall score: **0%**

1 -

□ Question 75 of 144

□ □

A 48-year-old caucasian male presents to his general practitioner for a routine check up. He is asymptomatic and has a past medical history of type two diabetes and hypercholesterolaemia. He is a non smoker, does not drink alcohol, and works as a teacher. Currently he takes metformin 500 mg thrice daily, gliclazide 80 mg daily and simvastatin 40 mg nightly. Examination is normal, body mass index is 22 kg/m², blood pressure is 140/78 mmHg and fundoscopy is normal. Urine dip shows protein 2+. Routine bloods show:

Hb	132 g/l	Na ⁺	137 mmol/l
Platelets	204 * 10 ⁹ /l	K ⁺	4.6 mmol/l
WBC	5.6 * 10 ⁹ /l	Urea	5.7 mmol/l
Neuts	4.5 * 10 ⁹ /l	Creatinine	97 µmol/l
Lymphs	1.0 * 10 ⁹ /l	eGFR	62 mg/l
Eosin	0.04 * 10 ⁹ /l	HbA1c	47 mmol/mol

What management changes would you consider?

	Amlodipine 5 mg once daily
	Bendroflumethiazide 2.5 mg once daily
	Increase gliclazide to 80 mg twice daily
	Stop metformin
	Ramipril 2.5 mg once daily

Overall score: **0%**

1 -

□ Question 75 of 144



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	Increase gliclazide to 80 mg twice daily
	Stop metformin
	Ramipril 2.5 mg once daily

Overall score: **0%**

1 -

□ Question 76 of 144

□ □

A 45-year-old teacher is reviewed in a routine nephrology clinic. She has end stage renal failure with focal segmental glomerular sclerosis (FSGS) on biopsy and is receiving renal replacement via haemodialysis. She requires hearing aids for bilateral sensorineural hearing loss and is of short stature. She mentions that she has been feeling more tired and lethargic in the last few months. A fasting blood sugar taken by her GP is 8.0mmol/l. She has a family history of diabetes in her mother and maternal grandmother, both of whom also required hearing aids at an early age. Given the above features, what is the most likely cause of her end stage renal failure?

	Autosomal dominant polycystic kidney disease
	Alport syndrome
	Liddle syndrome
	Maternally inherited diabetes and deafness (MIDD)
	Granulomatosis with polyangiitis (Wegener granulomatosis)

Dashboard

Overall score: 0%

1 -

□ Question 76 of 144

□ □

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	Alport syndrome
	Liddle syndrome
	Maternally inherited diabetes and deafness (MIDD)
	Granulomatosis with polyangiitis (Wegener granulomatosis)

Dashboard

Overall score: **0%****1** -

□ Question 77 of 144



A 59 year-old woman presents for her annual diabetic check-up. She has had type 2 diabetes mellitus for 15 years and takes only metformin for the diabetes. Her HbA1c was revealed as being 40 mmol/mol on her last diabetes check-up 1 week ago. Her past medical history includes peripheral vascular disease and migraine. She has a smoking history of 20 pack years and drinks 5-10 units of alcohol per week. On examination, her pulse rate is 86 beats per minute and her blood pressure is 126/70 mmHg and is otherwise unremarkable.

Blood tests reveal:

Na ⁺	140 mmol/l
K ⁺	3.4 mmol/l
Urea	7.0 mmol/l
Creatinine	105 µmol/l

Urinalysis reveals:

Protein	Negative
Glucose	Negative
Leucocytes	Negative
Nitrites	Negative

24-hour urine sample demonstrates 190 mg of albumin in the urine.

What is the most appropriate next management with regards to her renal function?

	Start a beta blocker
	Start an angiotensin II receptor blocker

	Optimise the patient's glycaemic control
	Start an ACE inhibitor
	Start a thiazide diuretic

Dashboard

Overall score: **0%**

1 -

□ Question 77 of 144



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	Optimise the patient's glycaemic control
	Start an ACE inhibitor
	Start a thiazide diuretic

Dashboard

Overall score: **0%**
1 -

Question 78 of 144



A 92-year-old lady is admitted to the orthopaedic ward following a fall and lying three hours on the floor. She was brought in by ambulance and diagnosed with a right intertrochanteric fractured neck of femur. She was operated on six hours later and underwent fixation with a dynamic hip screw. She was given two units of blood during surgery.

The next day she reviewed by the orthogeriatric team. Over the last twelve hours, she has passed 337ml of urine. Her creatinine from the day before was 162umol/l. Her baseline creatinine from two months ago was 45umol/l. Her weight is 61kg.

What is the most appropriate description of her current renal function?

	No renal impairment
	Stage I acute kidney injury
	Stage II acute kidney injury
	Stage III acute kidney injury
	Chronic renal disease

Dashboard

Overall score: 0%

1 -

Question 78 of 144



A 92-year-old lady is admitted to the orthopaedic ward following a fall and lying three hours on the floor. She was brought in by ambulance and diagnosed with a right intertrochanteric fractured neck of femur. She was operated on six hours later and underwent fixation with a dynamic hip screw. She was given two units of blood during surgery.

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What is the most appropriate description of her current renal function?

	No renal impairment
	Stage I acute kidney injury
	Stage II acute kidney injury
	Stage III acute kidney injury
	Chronic renal disease

Dashboard

Overall score: 0%

1 -

□ Question 79 of 144

□ □

A 72-year-old woman is admitted with a cough and fever. She has been unwell for four days with a worsening productive cough, chest pain, fever and shortness of breath. Observations show tachycardia, fever, and hypoxia. She weighs 42kg. A chest x-ray demonstrated right middle lobe consolidation and she is diagnosed with a lower respiratory tract infection and sepsis.

She is given IV fluids, IV antibiotics and a urinary catheter is inserted. She is reviewed at the post-take ward round 8 hours later. Since then she has passed 141ml of urine, which appears dark. You calculate that she is passing urine at a rate of 0.42ml/kg/hr. Creatinine from admission is 87µmol/L. There are no previous levels of creatinine measured.

What is the most appropriate description of her renal function?

	No renal impairment
	Stage I acute kidney injury
	Stage II acute kidney injury
	Stage III acute kidney injury
	Chronic renal disease

Dashboard

Overall score: 0%

1 -

□ Question 79 of 144

□ □

A 72-year-old woman is admitted with a cough and fever. She has been unwell for four days with a worsening productive cough, chest pain, fever and shortness of breath. Observations show tachycardia, fever, and hypoxia. She weighs 42kg. A chest x-ray demonstrated right middle lobe consolidation and she is diagnosed with a lower respiratory tract infection and sepsis.

She is given IV fluids, IV antibiotics and a urinary catheter is inserted. She is reviewed at the post-take ward round 8 hours later. Since then she has passed 141ml of urine, which appears dark. You calculate that she is passing urine at a rate of 0.42ml/kg/hr. Creatinine from admission is 87 μ mol/L. There are no previous levels of creatinine measured.

What is the most appropriate description of her renal function?

	No renal impairment
	Stage I acute kidney injury
	Stage II acute kidney injury
	Stage III acute kidney injury
	Chronic renal disease

Dashboard

Overall score: **0%****1** -

□ Question 80 of 144

□ □

You see a 56-year-old female in the renal low clearance clinic with known progressive proteinuric diabetic nephropathy. Despite maximal medical therapy she has had poorly controlled type 1 diabetes since 18 years of age; she also has hypertension and hypercholesterolaemia. She is asymptomatic and feels fit and well but is concerned regarding the deterioration in her kidney function. Cardiovascular, respiratory and abdominal examinations are unremarkable. A sensory peripheral neuropathy, reduced dorsalis pedis pulses bilaterally and pitting oedema to both ankles are noted. Fundoscopy shows evidence of photocoagulation therapy in both eyes. Today's blood results show:

Hb	109 g/l	Na ⁺	129 mmol/l
Platelets	111 * 10 ⁹ /l	K ⁺	5.1 mmol/l
WBC	5.7 * 10 ⁹ /l	Urea	22 mmol/l
Neuts	4.6 * 10 ⁹ /l	Creatinine	259 µmol/l
HbA1c	86 mmol/mol	eGFR	18 ml/min/1.73 ²

Her eGFR 3 months ago was 20. Considering her progressive stage 4 chronic kidney disease what is the gold standard treatment option in this case?

	Haemodialysis
	Combined renal and pancreas transplant
	Peritoneal dialysis
	Pancreas transplant
	Renal transplant

Overall score: **0%**

1 -

□ Question 80 of 144

□ □

You see a 56-year-old female in the renal low clearance clinic with known progressive proteinuric diabetic nephropathy. Despite maximal medical therapy she has had poorly controlled type 1 diabetes since 18 years of age; she also has hypertension and hypercholesterolaemia. She is asymptomatic and feels fit and well but is concerned regarding the deterioration in her kidney function. Cardiovascular, respiratory and abdominal examinations are unremarkable. A sensory peripheral neuropathy, reduced dorsalis pedis pulses bilaterally and pitting oedema to both ankles are noted. Fundoscopy shows evidence of photocoagulation therapy in both eyes. Today's blood results show:

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	Haemodialysis
	Combined renal and pancreas transplant
	Peritoneal dialysis
	Pancreas transplant
	Renal transplant

Overall score: **0%**

1 -

□ Question 81 of 144



A 64-year-old lady with a background of Alzheimer's dementia presents with a 3 day history of increased confusion, lower abdominal pain and foul smelling urine. Blood tests on admission show:

Hb	119 g/l	Na ⁺	136 mmol/l
Platelets	425 * 10 ⁹ /l	K ⁺	3.7 mmol/l
WBC	15.9 * 10 ⁹ /l	Urea	7.2 mmol/l
Neuts	13 * 10 ⁹ /l	Creatinine	78 µmol/l
Lymphs	2 * 10 ⁹ /l	CRP	140 mg/l
Eosin	0.02 * 10 ⁹ /l		

She is started on treatment for a urinary tract infection. 2 days later her blood tests show the following:

Hb	115 g/l	Na ⁺	141 mmol/l
Platelets	360 * 10 ⁹ /l	K ⁺	5.2 mmol/l
WBC	10.2 * 10 ⁹ /l	Urea	8 mmol/l
Neuts	7.5 * 10 ⁹ /l	Creatinine	105 µmol/l
Lymphs	1.5 * 10 ⁹ /l	CRP	43 mg/l
Eosin	0.001 * 10 ⁹ /l		

Which antibiotic was she likely to have been treated with?

	Trimethoprim
	Erythromycin

	Co-amoxiclav
	Nitrofurantoin
	Ciprofloxacin

Dashboard

Overall score: **0%**

1 -

□ Question 81 of 144



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Which antibiotic was she likely to have been treated with?

	Trimethoprim
	Erythromycin

	Co-amoxiclav
	Nitrofurantoin
	Ciprofloxacin

Dashboard

Overall score: **0%**
1 -

□ Question 82 of 144



A 44-year-old Greek-Cypriot man is reviewed in the renal outpatient clinic. His renal function has been progressively deteriorating over the past 5 years secondary to poorly controlled type 2 diabetes mellitus. His eGFR is now 7 ml/min but continues to pass urine. Recent ultrasound scans have shown that he would anatomically be suitable for a renal transplant. However, you explain that in the context of his ethnicity, there is an uncertain wait for suitability of organs, should the patient require to proceed down this path. His 15-year-old son, who is present with the patients two daughters and wife, offers his father a donor kidney due to the high likelihood of compatibility, which the patient would like to proceed with.

The father's blood tests are shown below::

Hb	89 g/l
Platelets	178 * 10 ⁹ /l
WBC	6.5 * 10 ⁹ /l

Na ⁺	144 mmol/l
K ⁺	5.3 mmol/l
Urea	18.2 mmol/l
Creatinine	280 µmol/l
pH	7.32

What is the most appropriate next step?

	Monitor renal function, discuss renal replacement therapy in 6 months time
	Start haemodialysis today, discuss renal replacement therapy in 6 months time
	Start preparation for haemodialysis and list for renal transplant on national transplant list

	Start preparation for haemodialysis and list for renal transplant with the patients son's kidney
	Palliation

Dashboard

Overall score: **0%**
1 -

Question 82 of 144



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Monitor renal function, discuss renal replacement therapy in 6 months time

Start haemodialysis today, discuss renal replacement therapy in 6 months time

Start preparation for haemodialysis and list for renal transplant on national transplant list

	Start preparation for haemodialysis and list for renal transplant with the patients son's kidney
	Palliation

Dashboard

Overall score: **0%**
1 -

Question 83 of 144

□ □

A 67-year-old woman with a renal transplant is seen in clinic. She has noted increased swelling of her legs over the past 3 weeks but is relatively well otherwise.

On examination she is hypertensive at 162/110mmHg and has pitting oedema up to the mid shin bilaterally. Urine dip shows protein 3+ and blood 2+, with a serum creatinine of 142umol/l (previously 70umol/l).

A renal biopsy reveals a recurrence of her original disease.

Which disease has the highest rate of recurrence in renal transplant patients?

	Membranoproliferative glomerulonephritis
	IgA nephropathy
	Polycystic kidney disease
	Focal segmental glomerulosclerosis
	Alport's syndrome

Dashboard

Overall score: 0%

1 -

Question 83 of 144

□ □

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	Membranoproliferative glomerulonephritis
	IgA nephropathy
	Polycystic kidney disease
	Focal segmental glomerulosclerosis
	Alport's syndrome

Dashboard

Overall score: **0%**

1 -

□ Question 84 of 144



A 72-year-old man is admitted with sudden onset shortness of breath and haemoptysis, with oxygen saturations of 92% on room air. Two days prior to admission, his general practitioner had prescribed furosemide 40mg once a day for progressive lower limb swelling and fatigue. He was due to see his general practitioner again tomorrow to review the initial blood tests. His past medical history includes systemic hypertension and stage 2 colon cancer treated with surgical resection and adjuvant chemotherapy (15 years ago). He is a current smoker.

An arterial blood gas shows a type 1 respiratory failure, with a pH of 7.31 and a pO₂ of 9.7 kPa. Oxygen saturations of >96% are achieved with four litres of oxygen. A chest x-ray shows alveolar infiltrates within the right lower lobe. Urgent spirometry reveals an increased transfer factor.

Urine dip demonstrates a loss of protein, but no blood, leucocytes or nitrites.

A full panel of bloods, including a full vasculitic screen is requested (see below).

White cells	12.0 × 10 ⁹ /l
Haemoglobin	11.7 g/dl
Sodium	144 mmol/l
Potassium	5.6 mmol/l
Urea	18 mmol/l
Creatinine	240 mol/l
Albumin	19 g/l
ANA	negative
ANCA	negative
Anti-GBM	positive

What is the next management step?

--	--

	Thrombolysis
	Intravenous antibiotics
	Haemodialysis
	Continuous positive airway pressure (CPAP)
	Plasmapheresis

Dashboard

Overall score: 0%

1 -

□ Question 84 of 144



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ANA	negative
ANCA	negative
Anti-GBM	positive

What is the next management step?

	Thrombolysis
	Intravenous antibiotics
	Haemodialysis
	Continuous positive airway pressure (CPAP)
	Plasmapheresis

Dashboard

Overall score: **0%**

1 -

Question 85 of 144

A 32 year-old man presented to his GP with dark coloured urine. Two weeks previously he had a sore throat but didn't see his GP at that time. He had no past medical history or family history of note.

On examination, his pulse was 60 beats per minute and his blood pressure was 160/95 mmHg. Abdominal examination was unremarkable. Urinalysis showed blood 3+ and protein 1+.

What is the most important diagnostic investigation?

<input type="checkbox"/>	Antinuclear antibodies
<input type="checkbox"/>	Anti glomerular basement membrane antibodies
<input type="checkbox"/>	Serum electrophoresis
<input type="checkbox"/>	Anti-neutrophil cytoplasmic antibodies
<input type="checkbox"/>	Antistreptolysin O titre

Dashboard

Overall score: **0%**

1 -

Question 85 of 144

□ □

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	Serum electrophoresis
	Anti-neutrophil cytoplasmic antibodies
	Antistreptolysin O titre

Dashboard

Overall score: **0%**

1 -

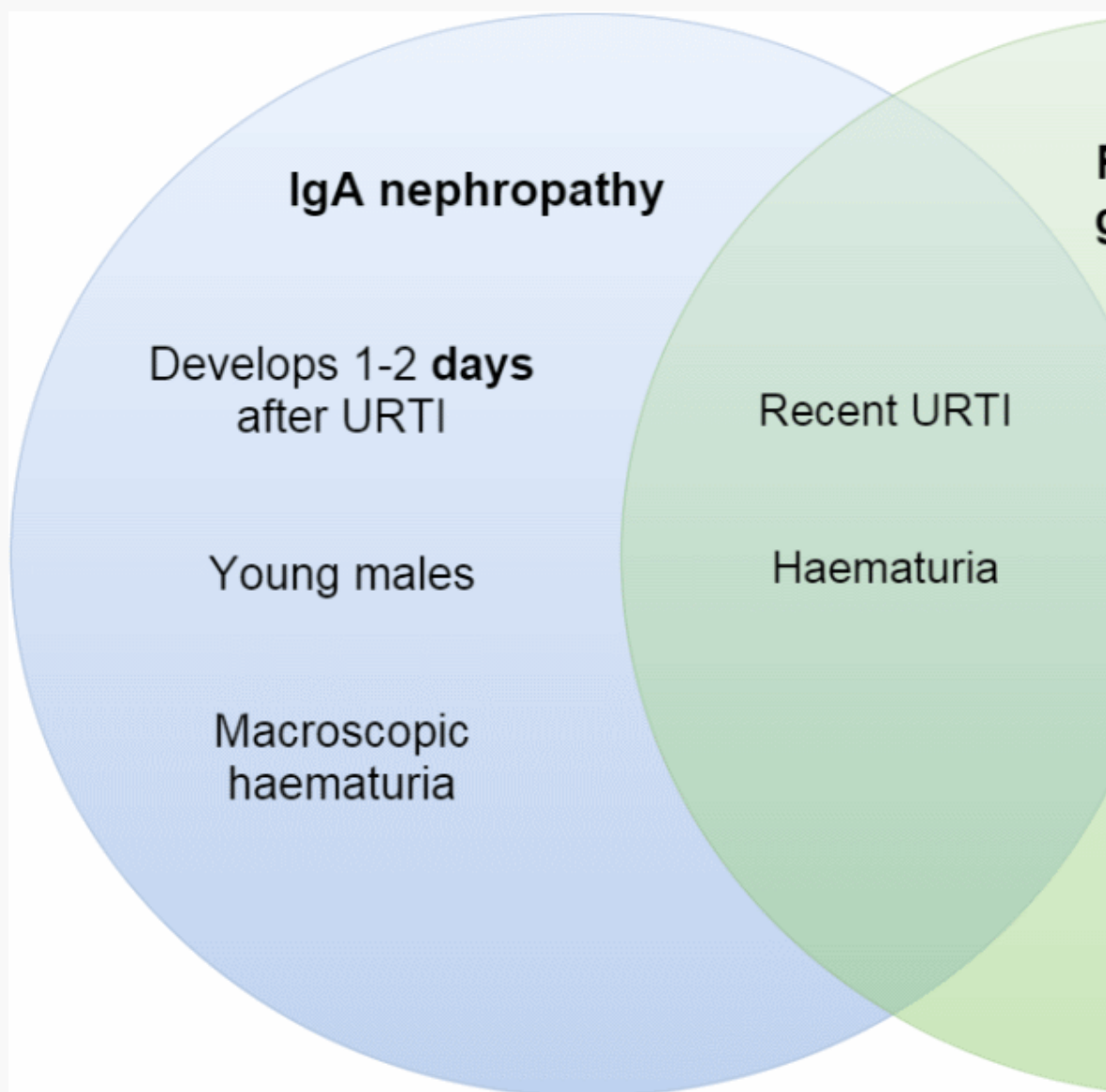
Question 85 of 144

A 32 year-old man presents to his GP at that time. He

On examination, his pulse was unremarkable. Urinalysis

What is the most important

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<input type="checkbox"/>	Serum electrophoresis
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Dashboard

Overall score: **0%**

1 -

□ Question 85 of 144

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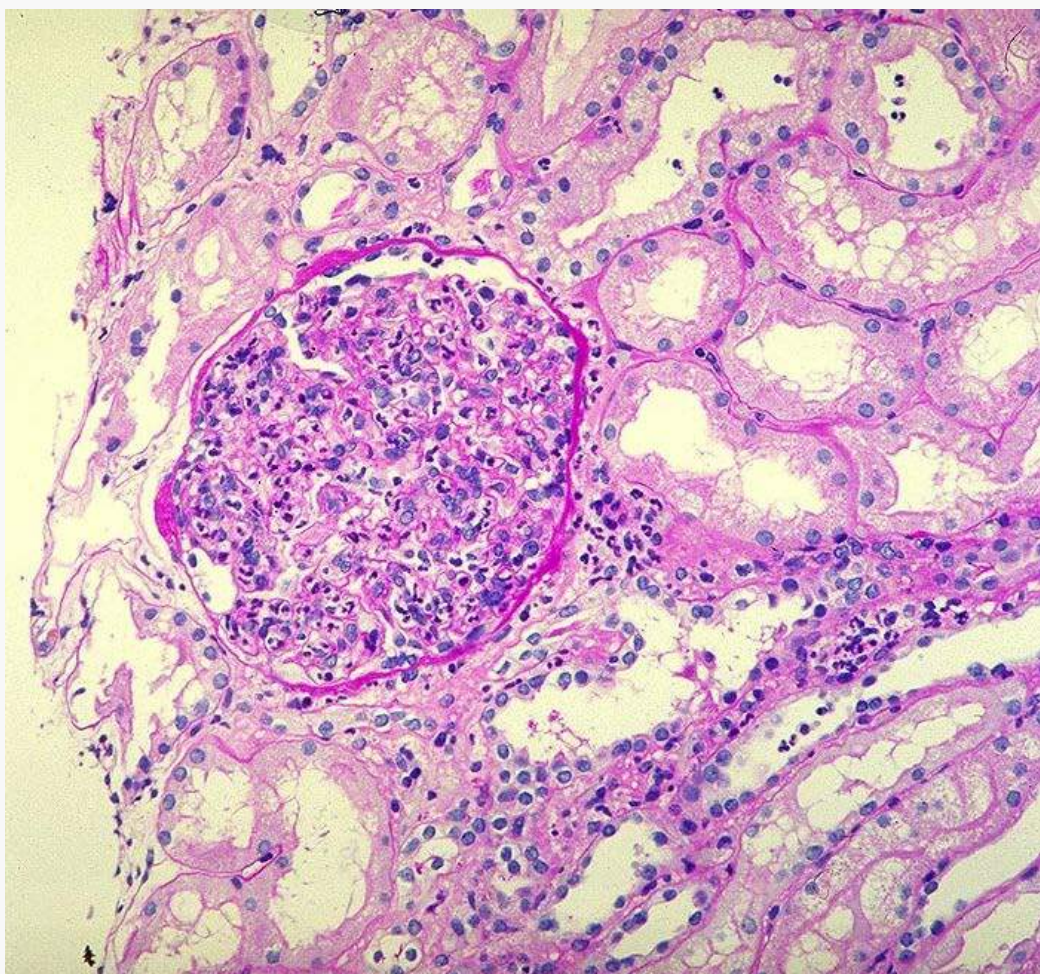
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	Anti glomerular basement membrane antibodies
	Serum electrophoresis
	Anti-neutrophil cytoplasmic antibodies
	Antistreptolysin O titre

Dashboard

Overall score: **0%**

1 -



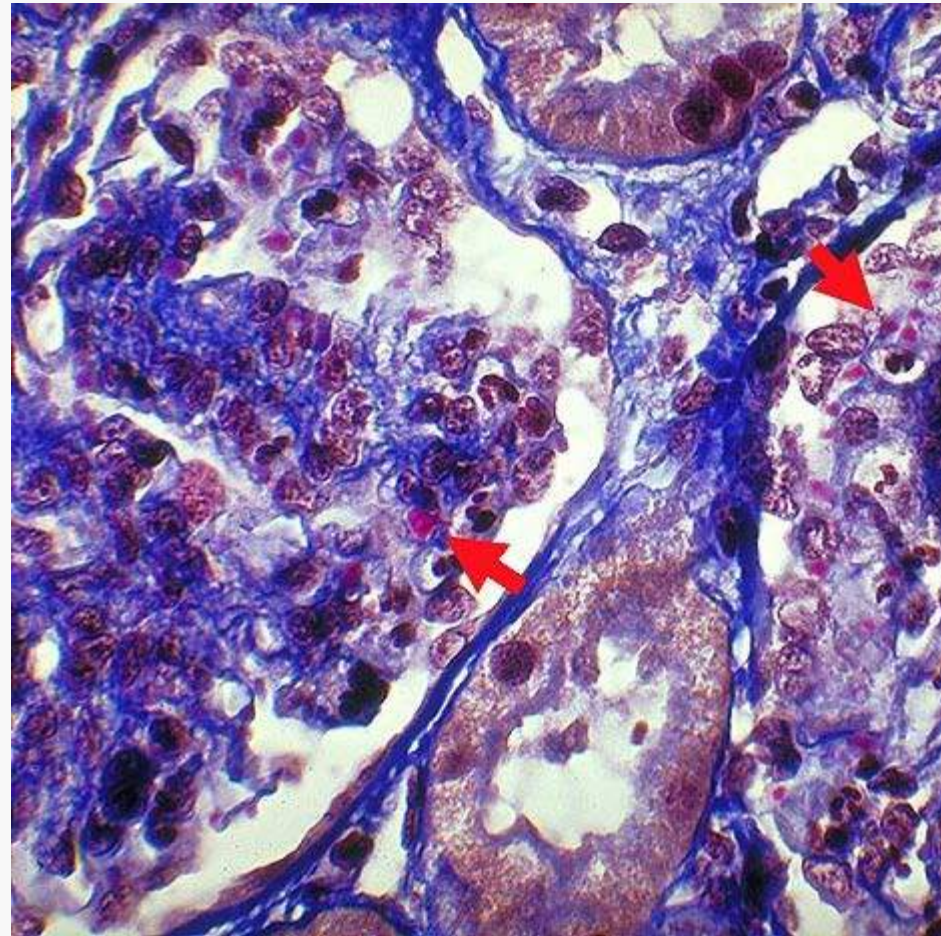
Question 85 of 144

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Dashboard

Overall score: 0%

1 -

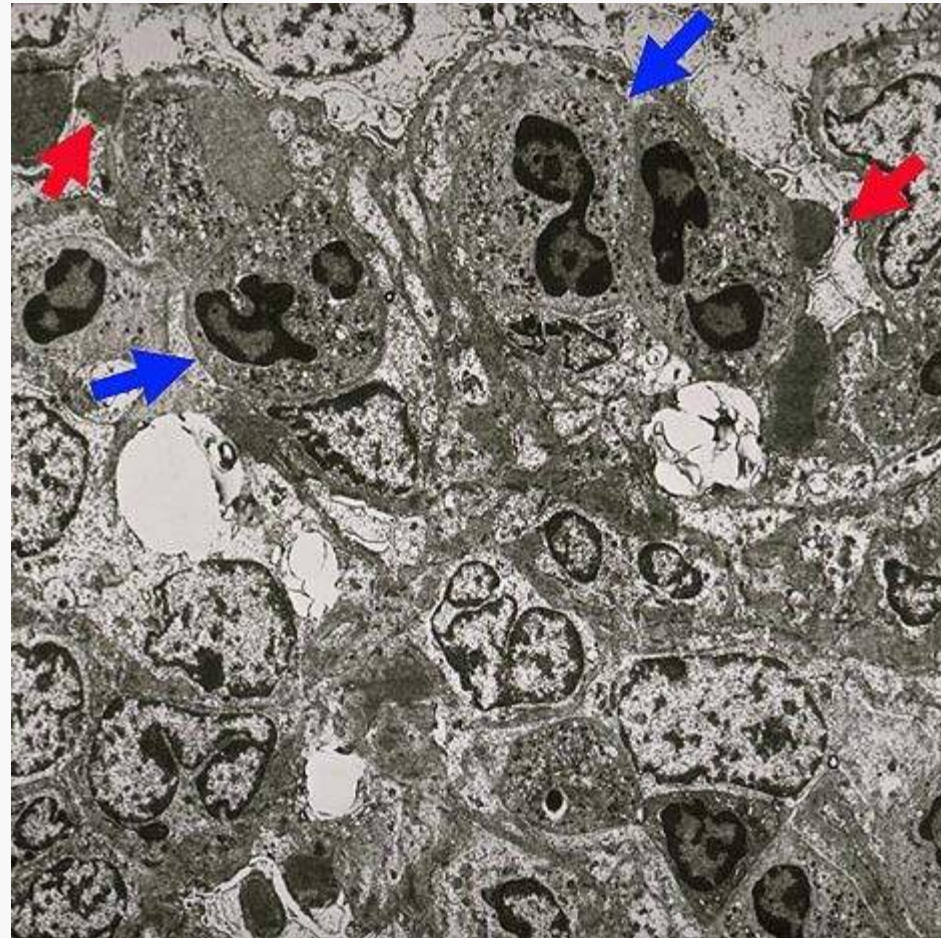
Question 85 of 144

A 32 year-old man presented to his GP with decreased vision. He had not seen his GP at that time. He had no past medical history.

On examination, his pulse was 60 beats per minute, blood pressure was unremarkable. Urinalysis showed blood 3+ and protein 1+.

What is the most important diagnostic investigation?

<input type="radio"/>	Antinuclear antibodies
<input type="radio"/>	Anti glomerular basement membrane antibodies
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<input checked="" type="radio"/>	Antistreptolysin O titre



Dashboard

Overall score: 0%

1 -

□ Question 86 of 144



A 73 year old gentleman was shown to have left ventricular dysfunction and hypertrophy on an echocardiogram post acute myocardial infarction (MI). Prior to discharge he was started on ramipril 2.5mg, bisoprolol 2.5mg, atorvastatin 10mg and aspirin 75mg. His medical history included osteoporosis for which he took calcichew D3 forte and alendronic acid. He did not smoke or drink alcohol. On admission his kidney function showed the following:

Sodium	136 mmol/L
Potassium	3.7 mmol/L
Urea	7.0 mmol/L
Creatinine	120 micromol/L
eGFR	64 ml/min/1.73m ²

His GP checked his bloods again ten days after the initiation of his new medication to titrate the dose of ramipril as requested on the discharge letter from the cardiology team. The results are below:

Sodium	134 mmol/L
Potassium	4.2 mmol/L
Urea	8.0 mmol/L
Creatinine	156 micromol/L
eGFR	50 ml/min/1.73m ²

How would you manage this gentleman's deteriorating renal function?

	Continue the ramipril and repeat the bloods in one week
	Decrease the dose of ramipril to 1.25mg daily
	Stop the ramipril

	Switch the ramipril to losartan
	Request a renal ultrasound scan

Dashboard

Overall score: **0%**
1 -

□ Question 86 of 144



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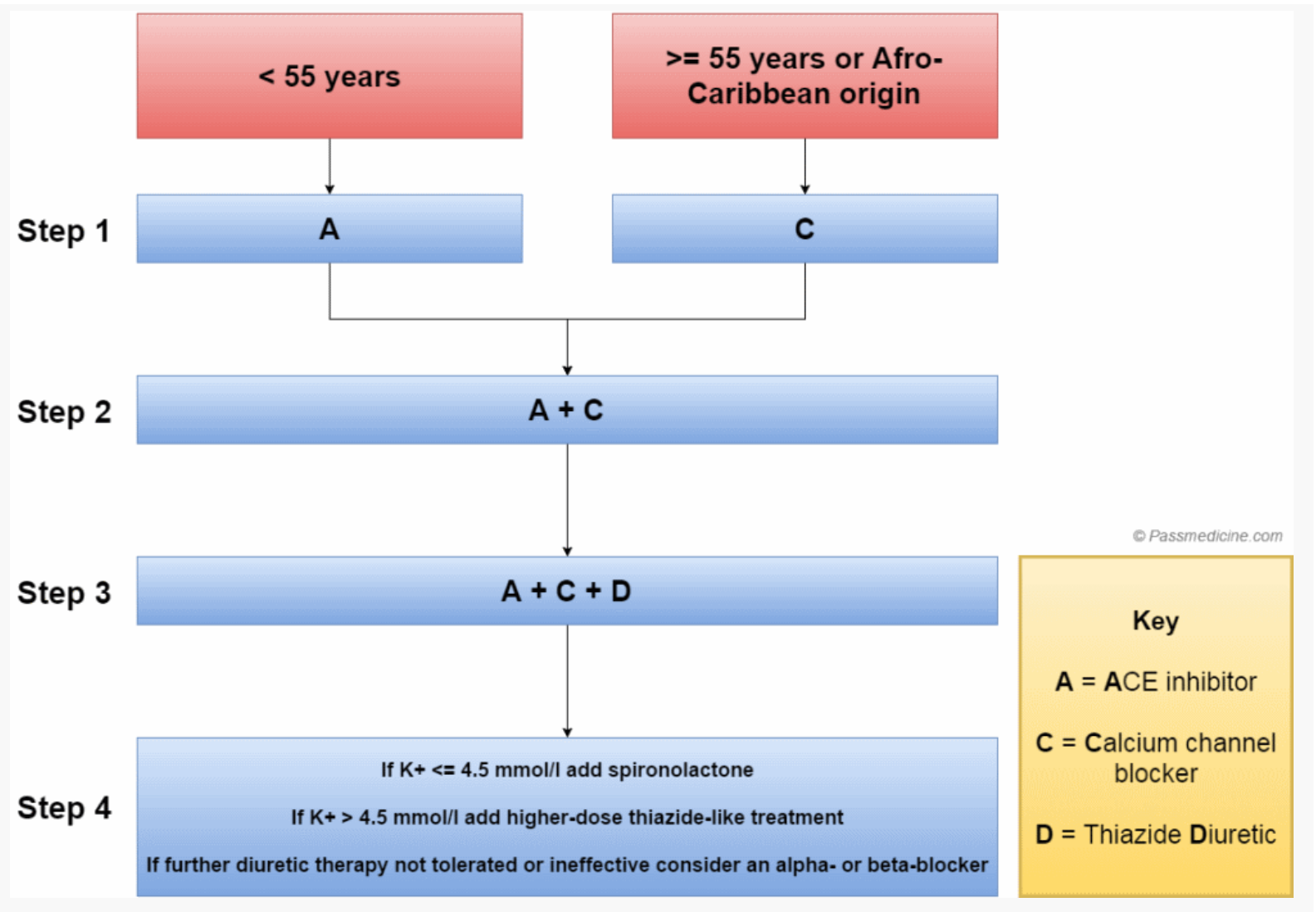
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	Switch the ramipril to losartan
	Request a renal ultrasound scan

Dashboard

Overall score: **0%**

1 -



Question 87 of 144

□ □

A 40-year-old man with chronic kidney disease stage 5 secondary to autosomal-dominant polycystic kidney disease is seen in general nephrology clinic. He reports worsening fatigue and denies any alteration in bowel habit or weight loss. Examination demonstrates a blood pressure of 120/56mmHg, heart rate 56bpm, respiratory rate 18/min, Sats 99% on air and he is afebrile. Abdomen is soft on non-tender with bilateral palpable kidneys and a palpable irregular liver edge. He is euvolemic.

Hb	78 g/l
Platelets	167 * 10 ⁹ /l
WBC	7 * 10 ⁹ /l
Ferritin	95 ng/mL

B12 and folate are within normal range.

What is the most appropriate next step?

	Faecal occult blood testing
	Blood transfusion
	Referral for OGD
	Iron transfusion
	Erythropoietin

Dashboard

Overall score: 0%

Question 87 of 144

□ □

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What is the most appropriate next step?

	Faecal occult blood testing
	Blood transfusion
	Referral for OGD
	Iron transfusion
	Erythropoietin

Dashboard

Overall score: 0%

□ Question 88 of 144



A 39 year-old woman presents with a four month history of abdominal distension, facial swelling and malaise. Her past medical history includes a diagnosis of membranous glomerulonephritis. On examination, heart sounds 1 and 2 were present with no added sounds and the pulse was regular, lung fields were clear, abdominal exam reveals mild ascites and there was bilateral periorbital oedema with pitting oedema of the shins.

Blood tests reveal:

Hb	8.8 g/dL
Platelets	$115 \times 10^9/l$
WBC	$4.2 \times 10^9/l$
Mean corpuscular volume (MCV)	82 fl
Na ⁺	148 mmol/l
K ⁺	3.3 mmol/l
Urea	9.2 mmol/l
Creatinine	176 μ mol/l
Bilirubin	14 μ mol/l
ALP	91 u/l
ALT	19 u/l
γ GT	68 u/l
Albumin	32 g/l
Cholesterol	7.9 mmol/l

Urinalysis reveals protein +++ and a 24-hour protein excretion is 5.2g.

High-dose diuretics and immunosuppression was started. Two weeks later the patient presents with abdominal pain

which is 6/10 on the pain scale and worse in her flanks. Her observations were normal apart from a temperature of 38.3°C. Blood tests are performed and are similar to before except a raised creatinine to 314 µmol/l and a urea of 15.1 mmol/l.

What is the most likely reason this patient has had a deterioration in her renal function?

	Renal infarction
	Renal artery stenosis
	Renal calculus
	Renal vein thrombosis
	Acute pyelonephritis

Dashboard

Overall score: 0%

1 -

□ Question 88 of 144



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Dashboard

Overall score: 0%
1 -

□ Question 89 of 144



A 48-year-old male presents to his general practitioner with a 3-month history of worsening swelling of both arms and legs. He has chronic lower back pain and has noticed an accidental increase of 4 kg over 2 months. He has a past medical history of ankylosing spondylitis, hypertension and hypercholesterolaemia and currently takes regular paracetamol, amlodipine 5mg OD and simvastatin 40 mg ON. On examination observations are normal, there is a reduction in all spinal movements and pitting oedema to his mid thighs bilaterally; there is no redness, tenderness or heat. His face and arms also appear swollen although no pitting is present. Respiratory, cardiovascular and abdominal examinations are normal.

Urine dip shows 3+ protein nil else and bloods are as follows:

Hb	115 g/l	Na ⁺	139 mmol/l
Platelets	380 * 10 ⁹ /l	K ⁺	4.3 mmol/l
WBC	8.1 * 10 ⁹ /l	Urea	4.2 mmol/l
Neuts	6.2 * 10 ⁹ /l	Creatinine	73 µmol/l
Lymphs	1.8 * 10 ⁹ /l	CRP	49 mg/l
Eosin	0.02 * 10 ⁹ /l	Albumin	25 g/l

What is the most likely cause of this patient's oedema?

	Minimal change nephropathy
	Amlodipine
	AL amyloidosis
	Hypertensive nephropathy
	AA amyloidosis

Dashboard

Overall score: **0%**

1 -

□ Question 89 of 144



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Dashboard

Overall score: **0%**

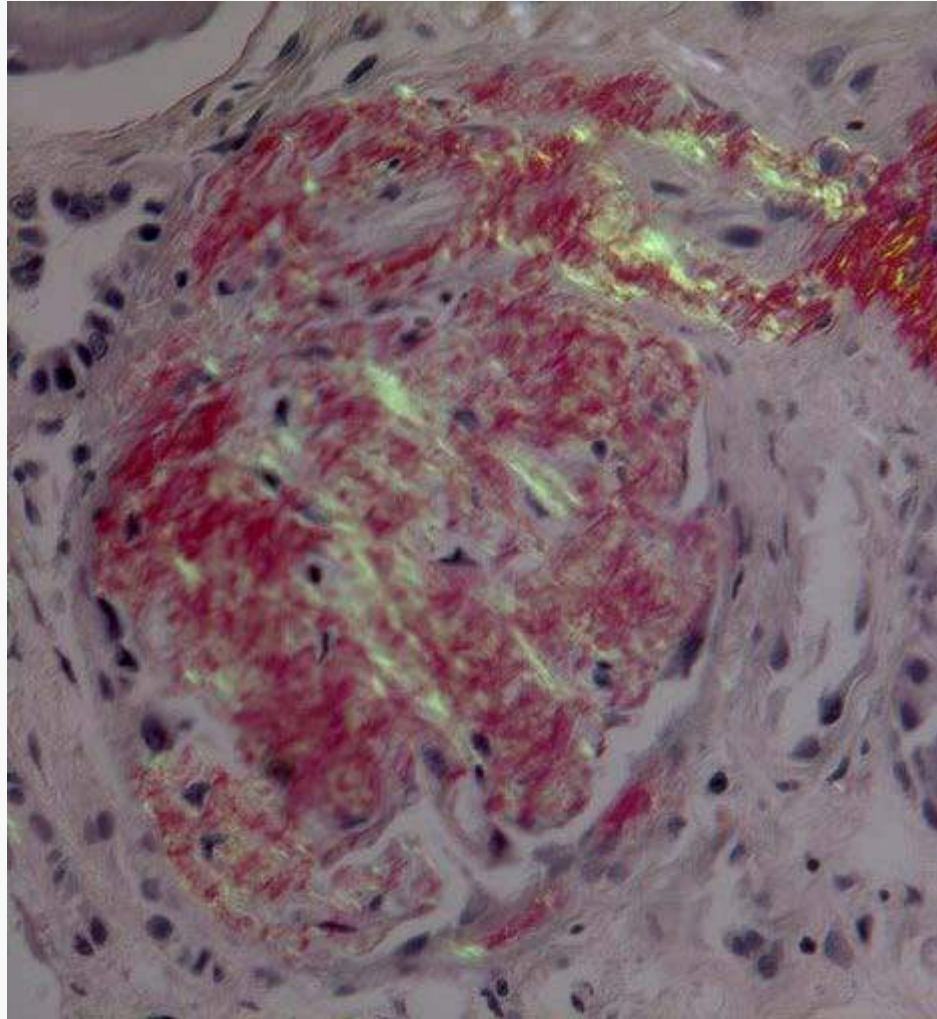
1 -

Question 89 of 144

A 48-year-old male presents to his general practitioner with bilateral lower leg oedema. He has chronic lower back pain and has a medical history of ankylosing spondylitis, hypercholesterolaemia, and hypertension. He is taking paracetamol, amlodipine 5mg OD and simvastatin 40mg OD. On examination, there is a reduction in all spinal movements and pitting oedema on the lower legs. His face and arms also appear swollen although chest and abdominal examinations are normal.

Urine dip shows 3+ protein nil else and bloods

Hb	115 g/l	Na ⁺	139 mmol/l
Platelets	380 * 10 ⁹ /l	K ⁺	4.3 mmol/l
WBC	8.1 * 10 ⁹ /l	Urea	4.2 mmol/l
Neuts	6.2 * 10 ⁹ /l	Creatinine	73 µmol/l
Lymphs	1.8 * 10 ⁹ /l	CRP	49 mg/l
Eosin	0.02 * 10 ⁹ /l	Albumin	25 g/l



What is the most likely cause of this patient's oedema?

	Minimal change nephropathy
	Amlodipine
	AL amyloidosis
	Hypertensive nephropathy
	AA amyloidosis

Dashboard

Overall score: **0%**

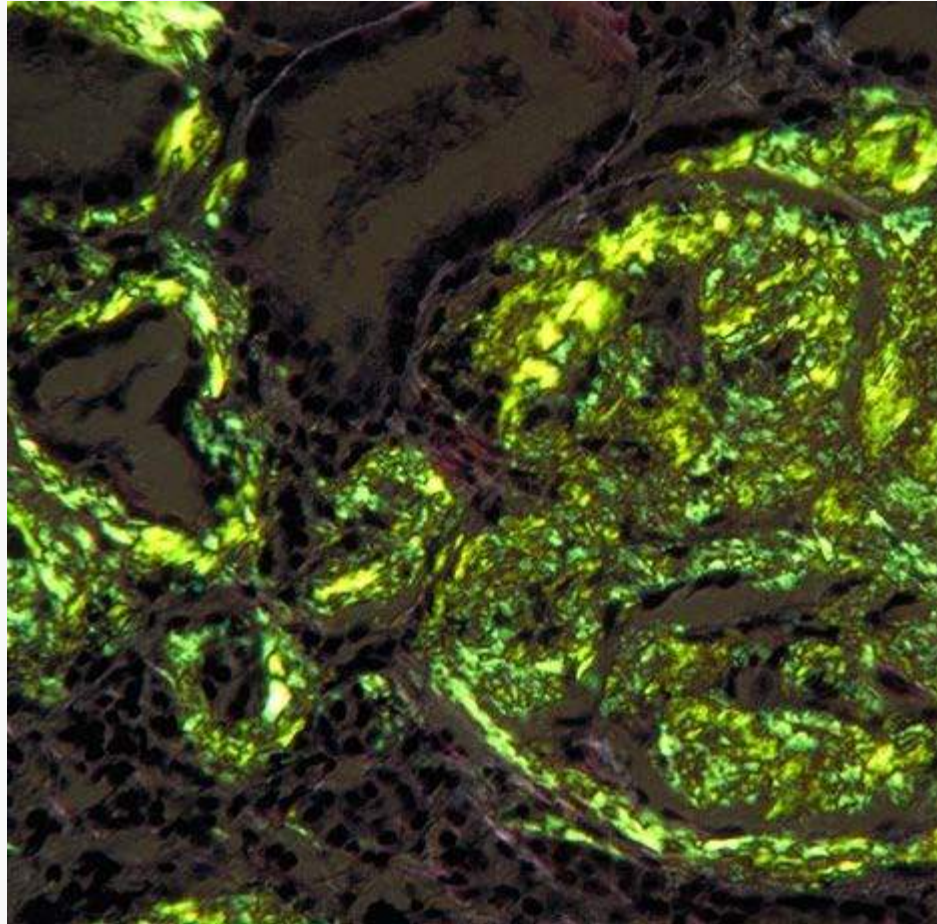
1 -

□ Question 89 of 144

A 48-year-old male presents to his general practitioner with bilateral lower leg oedema. He has chronic lower back pain and has a medical history of ankylosing spondylitis, hypertension, and is on regular paracetamol, amlodipine 5mg OD and simvastatin. There is a 10% reduction in all spinal movements and pitting oedema on the lower legs. His face and arms also appear swollen although chest and abdominal examinations are normal.

Urine dip shows 3+ protein nil else and bloods

Hb	115 g/l	Na ⁺	139 mmol/l
Platelets	380 * 10 ⁹ /l	K ⁺	4.3 mmol/l
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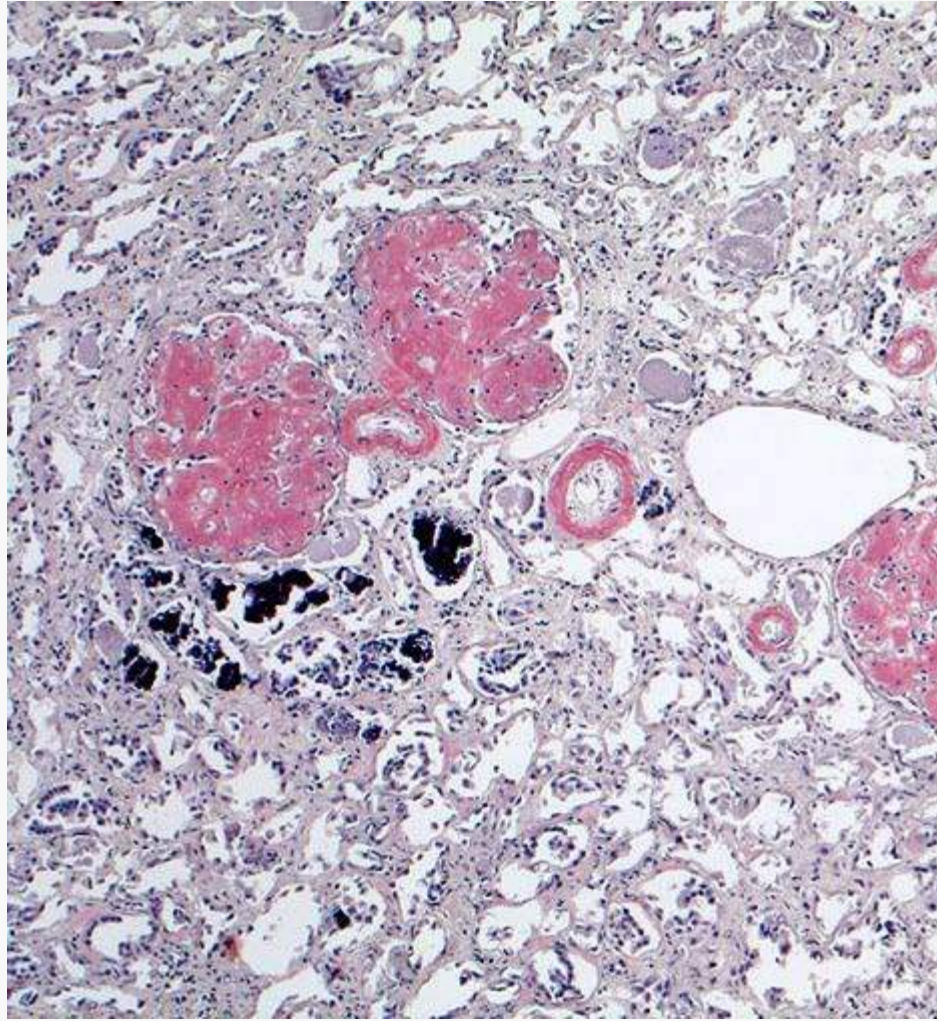
1 -

Question 89 of 144

A 48-year-old male presents to his general practitioner with bilateral lower leg oedema. He has chronic lower back pain and has a medical history of ankylosing spondylitis, hypercholesterolaemia, and is on regular paracetamol, amlodipine 5mg OD and simvastatin. He has a 10-year history of rheumatoid arthritis. On examination, there is a reduction in all spinal movements and pitting oedema of the lower legs. His face and arms also appear swollen although chest and abdominal examinations are normal.

Urine dip shows 3+ protein nil else and bloods

Hb	115 g/l	Na ⁺	139 mmol/l
Platelets	380 * 10 ⁹ /l	K ⁺	4.3 mmol/l
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Amlodipine
AL amyloidosis
Hypertensive nephropathy
AA amyloidosis

Dashboard

Overall score: **0%**

1 -

□ Question 90 of 144



A 62-year-old man attends hospital for an elective laparoscopic inguinal hernia repair. The surgical team note that the patient has impairment of his renal function on pre-operative blood tests and so refer the patient to the on-call general medical registrar. Following the referral, the surgical team were asked to organise some basic further investigations pending a medical review. The patient then underwent the planned surgical procedure, which was apparently uncomplicated and spent the following night in hospital as originally planned.

The day after the patient's operation, the patient was reviewed on the ward by the general medical team. He reported himself to be recovering well from the operation, although he was quite worried about the abnormality uncovered with his kidneys as he had been told he had 'chronic renal failure'. The patient had never previously been aware of any problems involving his kidneys and reported being in good general health, with his only previous medical concerns being well-controlled asthma and the hernia that lead to him being admitted to hospital. He denied any history of diabetes, hypertension, connective tissue disease, renal calculi or prostatic symptoms. There was no family history of kidney disease. The patient took a regular steroid inhaler for his asthma and denied significant use of non-steroidal anti-inflammatory drugs. The patient worked as a supermarket manager and reported smoking a cigar a couple of times per week.

On examination, the patient appeared to be in generally good health. Blood pressure was 128 / 85 mmHg. The patient was euvolaemic, with no evidence of pulmonary oedema or peripheral oedema. Examination of the patient's abdomen was unremarkable, except for the surgical incisions associated with his recent operation. The patient had been catheterised peri-operatively and was documented to be passing appropriate volumes of urine (i.e. > 0.5 ml / kg / hour).

Please see below for investigations arranged after the patient was admitted to hospital. The patient's GP surgery had been contacted but did not have records of any relevant recent blood tests.

Haemoglobin	136 g / dL
Mean cell volume	87.8 fl
White cell count	5.7×10^9 / microlitre
Platelets	238×10^9 / microlitre
Urea	7.9 mmol / L
Creatinine	131 micromol / L

eGFR	57 ml / min / 1.73 m2
Sodium	137 mmol / L
Potassium	4.1 mmol / L
Thyroid stimulating hormone	4.2 microU / mL (reference 0.4-5.0)
Urinalysis	no abnormality detected
Urine microscopy	no abnormality detected
Albumin:creatinine ratio	2.8 mg / mmol (reference < 3)

What is the appropriate classification of the patient's abnormal renal function?

	Chronic kidney disease G2A3
	Chronic kidney disease not confirmed
	Chronic kidney disease G2A1
	Chronic kidney disease G3aA1
	Chronic kidney disease G3bA2

Dashboard

Overall score: 0%

1 -

□ Question 90 of 144



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	Chronic kidney disease G3bA2

Dashboard

Overall score: **0%**
1 -

□ Question 91 of 144



A 64-year-old lady was admitted to hospital with haematuria. She had been feeling unwell in the preceding weeks with lethargy, vomiting, weight loss and fevers. A day prior to admission she developed haematuria with reduced urine output. She had no previous medical history but was an ex-smoker. She was fit and active working as a retail shop manager. Examination revealed a pale and lethargic woman with mild peripheral oedema. Her chest was clear, the abdomen was soft and non-tender with no palpable masses.

Investigations:

Urine dip: blood+++, protein++

Haemoglobin	86 g/L
White cell count	$8.7 \times 10^9/\text{L}$
Platelet Count	$201 \times 10^9/\text{L}$
INR	1.0

Serum sodium	139mmol/L
Serum potassium	6.3mmol/L
Serum urea	34.0mmol/L
Serum creatinine	789 micromol/L
CRP	32

Antinuclear antibody	negative
Anti-neutrophil cytoplasmic antibody	negative
Anti-glomerular basement membrane antibody	positive

Chest radiograph: Clear lung fields.

She was diagnosed with renal limited anti-GBM disease and started on methylprednisolone and cyclophosphamide. What other treatment should be initiated?

	Tacrolimus
	Blood transfusion
	IV tazocin
	Plasma exchange
	3-way catheter and bladder irrigation

Dashboard

Overall score: 0%

1 -

□ Question 91 of 144

□ □

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	Tacrolimus
	Blood transfusion
	IV tazocin
	Plasma exchange
	3-way catheter and bladder irrigation

Dashboard

Overall score: 0%

1 -

□ Question 92 of 144

□ □

A 68-year-old man with who has recently been commenced on regular haemodialysis secondary to diabetic nephropathy has come for a regular review. He is concerned about being anaemic as his neighbour who is also on haemodialysis told him he needs treatment for anaemia. When should this patient be investigated for anaemia?

	If his haemoglobin falls below 110g/L and he has symptoms suggestive of anaemia
	If his haemoglobin falls below 110g/L or he has symptoms suggestive of anaemia
	If his If his haemoglobin falls below 120g/L
	Only when he has symptoms suggestive of anaemia
	If his haemoglobin falls below 120g/L or he has symptoms suggestive of anaemia

Dashboard

Overall score: 0%

1 -

□ Question 92 of 144

□ □

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Dashboard

Overall score: **0%**

1 -

□ Question 93 of 144



A 25-year-old man attends renal clinic following a referral by his GP due to concerns about recent blood tests suggesting impaired renal function. The patient was a professional rugby player, and as part of pre-season training had undergone a range of screening blood tests. These tests had been entirely unremarkable, except for a reduced estimated glomerular filtration rate of 58 ml / min / 1.73 m². The rugby club had then informed the player of the need to attend his GP with the result, who referred the patient for urgent renal review.

The patient reports feeling very well in himself, but very concerned about the possibility that he had developed renal failure. The patient had never previously been aware of any problems involving his kidneys and his only previous medical concern was a successful emergency operation for testicular torsion 10 years previously. He denied any history of diabetes, hypertension, connective tissue disease, renal calculi or prostatic symptoms. There was no family history of kidney disease. The patient took no regular medications, and occasionally took over-the-counter ibuprofen if he suffered a sports injury, but not at other times. Due to his career, the patient was extremely physically active and regularly attended the gym for strength training.

On examination, the patient appeared to be generally very healthy, with a highly developed athletic physique. Cardiovascular, respiratory and abdominal examination was entirely unremarkable. Please see below for investigations arranged around 3 months after the initial blood tests, as part of the patient's referral to the renal clinic.

Haemoglobin	169 g / dL
Mean cell volume	87 fl
White cell count	9.5 x 10 ⁹ / microlitre
Platelets	243 x 10 ⁹ / microlitre
Urea	7.0 mmol / L
Creatinine	126 micromol / L
eGFR	56 ml / min / 1.73 m ²
Sodium	142 mmol / L
Potassium	4.3 mmol / L
Urinalysis	no abnormality detected

Urine microscopy	no abnormality detected
Albumin:creatinine ratio	1.9 mg / mmol (reference < 3)

What is the appropriate next investigation?

	Ultrasound renal tract
	Renal biopsy
	Genetic testing for PKD-1, PKD-2 and PKD-3 genes
	Serum cystatin-C
	Anti-neutrophil cytoplasmic antibodies

Dashboard

Overall score: 0%

1 -

□ Question 93 of 144



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□ Question 93 of 144



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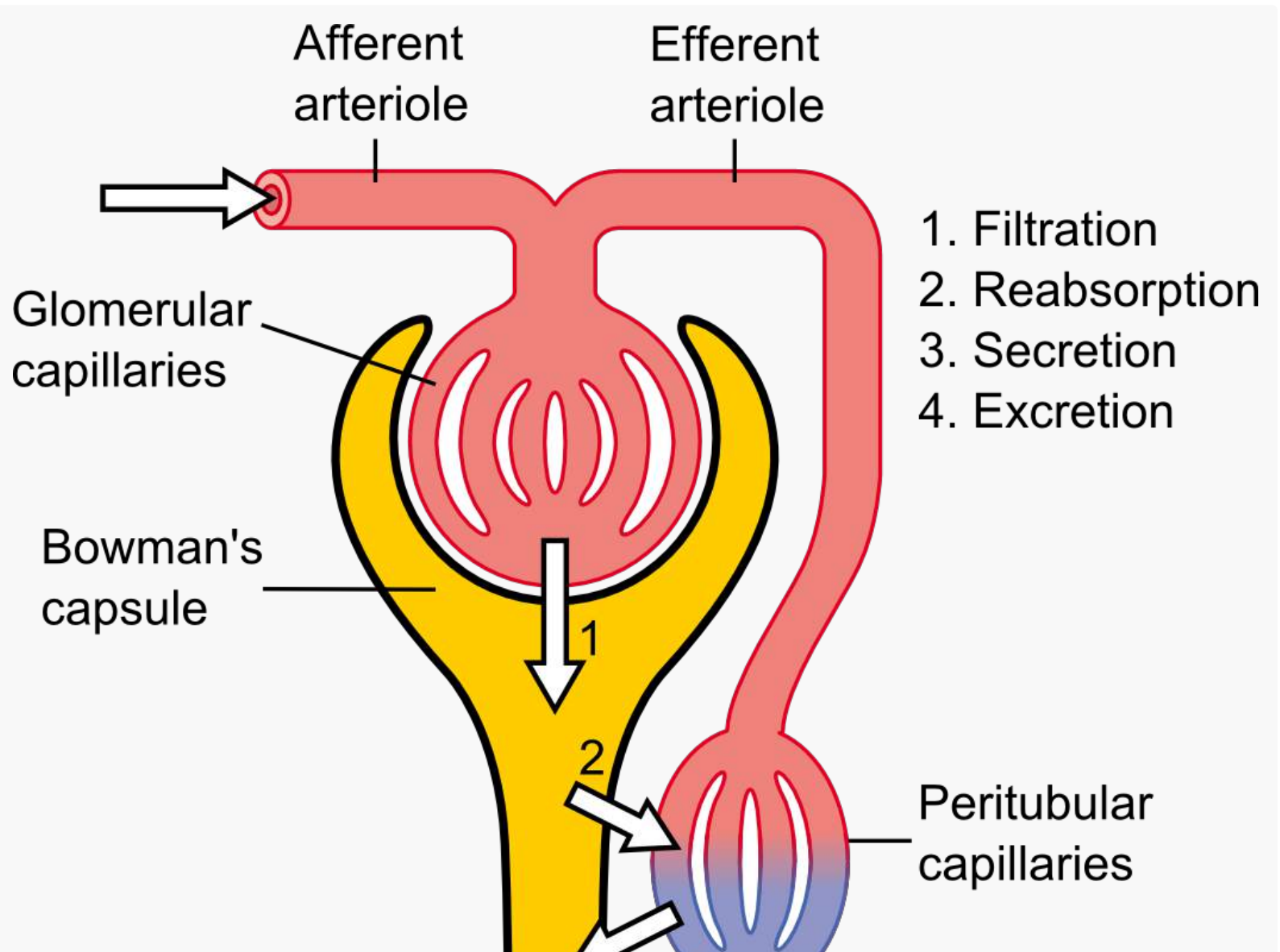
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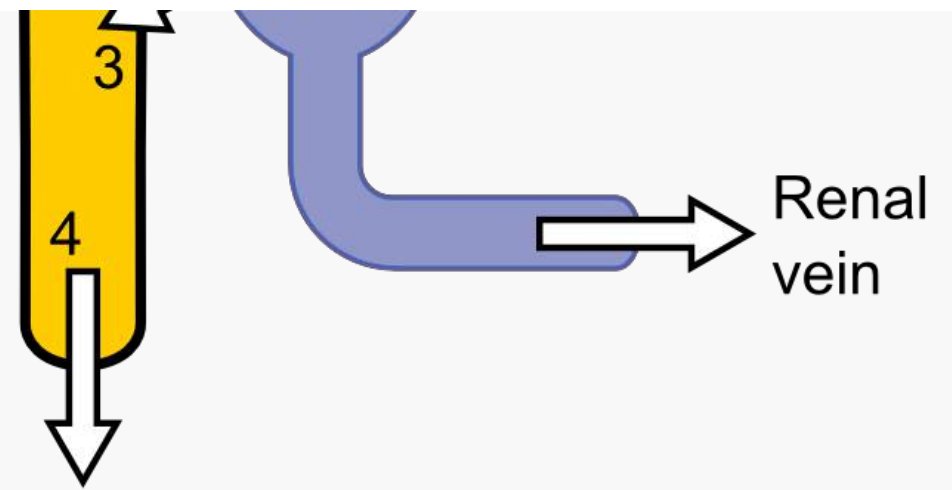
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Dashboard

Overall score: **0%**

1 -





Urinary excretion

$$\text{Excretion} = \text{Filtration} - \text{Reabsorption} + \text{Secretion}$$

□ Question 93 of 144



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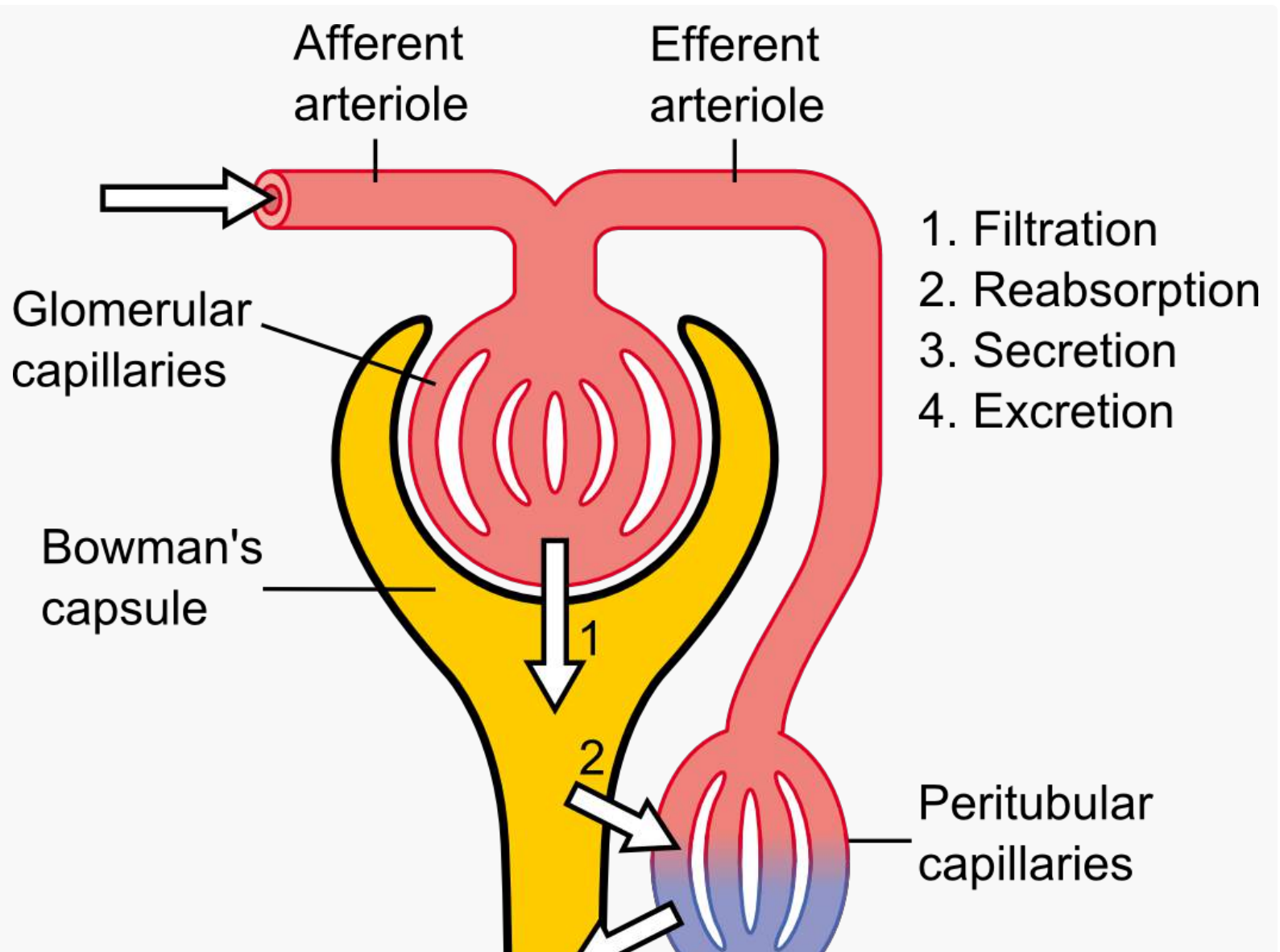
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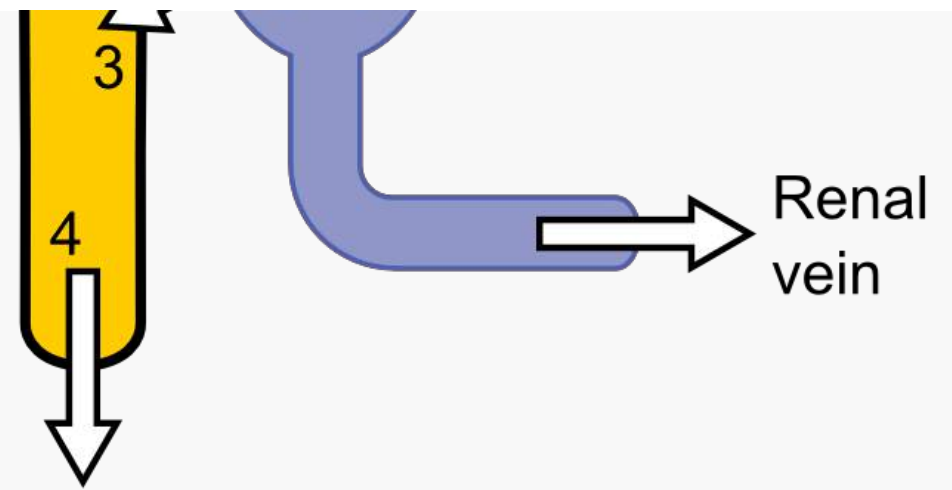
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Dashboard

Overall score: **0%**

1 -





Urinary excretion

$$\text{Excretion} = \text{Filtration} - \text{Reabsorption} + \text{Secretion}$$

□ Question 94 of 144



A 57-year-old man is admitted with general lethargy. He is currently being treated for bladder cancer, which has been complicated by paraneoplastic Guillain-Barré syndrome. Focussed examination is largely unremarkable. His bloods are printed off by the FY1:

Na+	139 mmol/l
K+	4.1 mmol/l
Urea	20.1 mmol/l (Baseline 4.2 mmol/l)
Creatinine	526 µmol/l (Baseline 86 µmol/l)
CRP	50 mg/l

An urgent KUB ultrasound is arranged, producing the following conclusion:

Severe bilateral hydronephrosis.

His urinalysis is as follows:

Nitrites	+ve
Leucocytes	3+
Blood	2+
Protein	1+

What is the most likely cause of his hydronephrosis?

	Urinary tract infection
	Ureteric blood clot

	Renal tract calculi
	Malignant infiltration of the ureters
	Retroperitoneal fibrosis

Dashboard

Overall score: **0%**
1 -

□ Question 94 of 144



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1 -

□ Question 94 of 144

□ □

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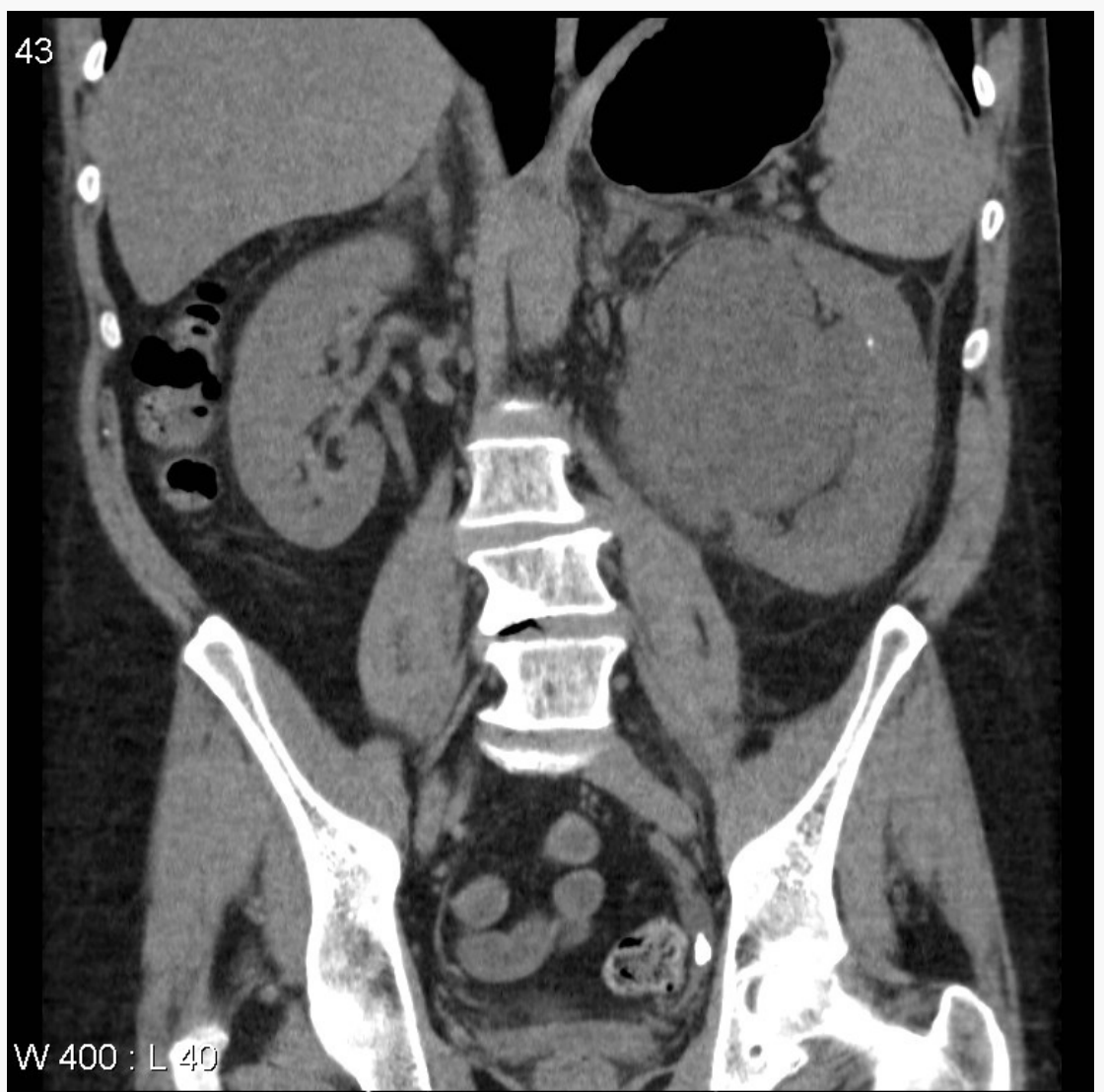
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Dashboard

Overall score: 0%

1 -



□ Question 95 of 144



A 48-year-old gentleman with chronic kidney disease secondary to adult polycystic kidney disease presents with a three-month history of increasing lethargy and fatigue. He reports feeling 'tired all the time' and some mild shortness of breath on climbing stairs. He denies any feelings of light headedness and has walked from the car park to the clinic without any difficulty. On examination he is pale. He has bilateral ballotable kidneys and fullness in the flanks. In his left arm, he has a maturing arterio-venous fistula that has not yet been used.

Bloods show:

Hb	80 g/l
Platelets	$125 \times 10^9/l$
WBC	$4.4 \times 10^9/l$

Na ⁺	135 mmol/l
K ⁺	4.8 mmol/l
Urea	12.2 mmol/l
Creatinine	265 μ mol/l
eGFR	15ml/min

Ferritin	102ng/ml
Transferrin saturation	23%

What is the best strategy for managing this patients' anaemia?

	Transfusion of two units of packed red blood cells immediately.
	Measurement of serum erythropoietin levels before any treatment.

	Commencement of erythropoiesis stimulating agents (ESA) aiming for a haemoglobin of 100-120 g/dL
	Commencement of erythropoiesis stimulating agents with a target haemoglobin of 120-140 g/dL
	Trial of oral steroids

Dashboard

Overall score: **0%**

1 -

Question 95 of 144



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	Commencement of erythropoiesis stimulating agents with a target haemoglobin of 120-140 g/dL
	Trial of oral steroids

Dashboard

Overall score: **0%**
1 -

□ Question 96 of 144



An 18 year-old man presented to his GP with facial puffiness and leg swelling over the past few weeks. He had no past medical history and no family history of note. He took no regular medications.

On examination, his pulse was 90 beats per minute and his blood pressure was 140/80 mmHg. Cardiovascular, respiratory and abdominal examination was unremarkable. Urinalysis showed protein 4+ and blood 1+ but was negative for glucose.

Hb	138 g/l
Platelets	$185 \times 10^9/l$
WBC	$6.6 \times 10^9/l$

Na ⁺	144 mmol/l
K ⁺	4.0 mmol/l
Urea	5.5 mmol/l
Creatinine	78 μ mol/l
Serum albumin	20 g/L
24 hour urine protein	5.1 g (<0.2)

Renal biopsy showed podocyte fusion on electron microscopy

What is the most appropriate next step in treatment?

	Rituximab
	Prednisolone
	Ramipril

	Intravenous immunoglobulin
	Plasmapheresis

Dashboard

Overall score: **0%**

1 -

□ Question 96 of 144



An 18 year-old man presented to his GP with facial puffiness and leg swelling over the past few weeks. He had no past medical history and no family history of note. He took no regular medications.

On examination, his pulse was 90 beats per minute and his blood pressure was 140/80 mmHg. Cardiovascular, respiratory and abdominal examination was unremarkable. Urinalysis showed protein 4+ and blood 1+ but was negative for glucose.

Hb	138 g/l
Platelets	$185 \times 10^9/l$
WBC	$6.6 \times 10^9/l$

Na ⁺	144 mmol/l
K ⁺	4.0 mmol/l
Urea	5.5 mmol/l
Creatinine	78 μ mol/l
Serum albumin	20 g/L
24 hour urine protein	5.1 g (<0.2)

Renal biopsy showed podocyte fusion on electron microscopy

What is the most appropriate next step in treatment?

	Rituximab
	Prednisolone
	Ramipril

	Intravenous immunoglobulin
	Plasmapheresis

Dashboard

Overall score: **0%**
1 -

□ Question 97 of 144



A 22-year-old male was admitted with severe abdominal pain. The pain was in his left flank area going down into his groin. It was constant and he was not able to lie still with the pain. With the pain he felt nauseated. He did not notice any urinary symptoms. He had a similar episode six months ago which resolved with conservative management. He stated since the episode he increased his fluid intake and instituted a trial of dietary change. He was otherwise fit and well, except for a past medical history of asthma for which he used Clenil modulite 200mcg BD and salmeterol 100mcg BD. He smoked 20 cigarettes per day and consumed 20 units of alcohol per week mainly at the weekends.

On examination, he was in obvious discomfort and restless. His blood pressure was 118/72 mmHg, his heart rate was 88 and his temperature was 36.9 degrees celsius. Examination of the cardiovascular system revealed the presence of normal heart sounds with warm well perfused peripheries. Other than tachypnoea, examination of his respiratory system was unremarkable. Examination of his gastrointestinal system revealed the presence of left renal angle tenderness but otherwise a soft non-tender abdomen with no evidence of guarding or rigidity. Examination of his neurological system was unremarkable.

A number of investigations were performed:

Na ⁺	142 mmol/l
K ⁺	4.0 mmol/l
Urea	4.2 mmol/l
Creatinine	77 µmol/l
CRP	12 mg/l
Adjusted calcium	2.40 mmol/l

Urinalysis: blood +++, nil else

KUB x-ray: single solitary area of calcification within left kidney

The patient was treated conservatively with an intravenous fluid infusion, non-steroidal anti-inflammatory drugs and opioid analgesia and within 48 hours recovered fully.

He was subsequently seen in the renal clinic where he underwent a number of investigations:

Urea and electrolytes	normal
Urate	0.39 (NR 0.12-0.42 mmol/l)
Vitamin D	62 (NR 30 100 ng/ml)
Parathyroid hormone 48	(NR 11-54 pg/ml)
Urine 24 hr collection	Calcium 525 (NR 25 - 300mg/24hrs) Oxalate 21 (NR 7 - 44 mg/24hrs) Citrate 588 (NR 320 1240mg/24hrs) Sodium 137 (NR 40 220mg/24hrs)

Which therapeutic option will most likely be of benefit in the prevention of future episodes?

	Calcium carbonate
	Bendroflumethiazide
	Allopurinol
	Captopril
	Furosemide

Dashboard

Overall score: 0%

1 -

□ Question 97 of 144



A 22-year-old male was admitted with severe abdominal pain. The pain was in his left flank area going down into his groin. It was constant and he was not able to lie still with the pain. With the pain he felt nauseated. He did not notice any urinary symptoms. He had a similar episode six months ago which resolved with conservative management. He stated since the episode he increased his fluid intake and instituted a trial of dietary change. He was otherwise fit and well, except for a past medical history of asthma for which he used Clenil modulite 200mcg BD and salmeterol 100mcg BD. He smoked 20 cigarettes per day and consumed 20 units of alcohol per week mainly at the weekends.

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	Calcium carbonate
	Bendroflumethiazide
	Allopurinol
	Captopril
	Furosemide

Dashboard

Overall score: 0%
1 -

Question 98 of 144



A 41-year-old lady was admitted feeling generally unwell with a headache, generalised aches and pains, lethargy and fevers. She had a previous medical history of type one diabetes and end-stage renal failure. She had undergone a simultaneous pancreas-kidney transplant ten months prior to admission with good graft function. Four months previously she had been admitted with neutropaenia which had led to the early cessation of her valganciclovir and a reduction in her immunosuppression. Her medications comprised of tacrolimus, prednisolone, mycophenolate and aspirin. On examination, she appeared pale, lethargic and unwell. She had a mid-line laparotomy scar with a palpable renal transplant in the left iliac fossa. Her temperature was 39.4 degrees Celsius, her pulse was 115 beats per minute and regular, her blood pressure was 102/59 mmHg, her respiratory rate was 22 breaths per minute and her oxygen saturations were 95% on room air.

Investigations:

Haemoglobin	108g/L
White cell count	$9.2 \times 10^9 /L$
Platelet Count	$347 \times 10^9 /L$
Neutrophil Count	$7.6 \times 10^9 /L$
Lymphocyte count	$0.5 \times 10^9 /L$

Serum sodium	129mmol/L
Serum potassium	5.4mmol/L
Serum urea	7.4mmol/L
Serum creatinine	174micromol/L
Albumin	32g/L
Alkaline phosphatase	204 IU/L
Alanine transaminase	46 IU/L
CRP	101mg/L

Chest X-ray: clear lung fields

What is the most likely diagnosis?

	Urinary tract infection
	Hepatitis C infection
	Cytomegalovirus infection
	Upper respiratory tract infection
	BK virus infection

Dashboard

Overall score: 0%

1 -

Question 98 of 144



A 41-year-old lady was admitted feeling generally unwell with a headache, generalised aches and pains, lethargy and fevers. She had a previous medical history of type one diabetes and end-stage renal failure. She had undergone a simultaneous pancreas-kidney transplant ten months prior to admission with good graft function. Four months previously she had been admitted with neutropaenia which had led to the early cessation of her valganciclovir and a reduction in her immunosuppression. Her medications comprised of tacrolimus, prednisolone, mycophenolate and aspirin. On examination, she appeared pale, lethargic and unwell. She had a mid-line laparotomy scar with a palpable renal transplant in the left iliac fossa. Her temperature was 39.4 degrees Celsius, her pulse was 115 beats per minute and regular, her blood pressure was 102/59 mmHg, her respiratory rate was 22 breaths per minute and her oxygen saturations were 95% on room air.

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Chest X-ray: clear lung fields

What is the most likely diagnosis?

	Urinary tract infection
	Hepatitis C infection
	Cytomegalovirus infection
	Upper respiratory tract infection
	BK virus infection

Dashboard

Overall score: **0%**

1 -

□ Question 99 of 144



A 64-year-old woman is seen in the low clearance renal clinic. She has a history of chronic kidney disease stage IV secondary to previous bilateral ureteric injury during hysterectomy with non-resolving acute kidney injury.

She is currently feeling well aside from some mild ankle swelling. She is currently taking losartan, alfacalcidol, calcium, cholecalciferol and sodium bicarbonate.

On examination she has a blood pressure of 175/91 mmHg and a heart rate of 92 beats per minute. She has normal heart sounds and her chest is clear. Her JVP is visible at 4cm and she has pitting oedema to the ankles.

Her blood tests are as follows:

Hb	121 g/l	Na ⁺	137 mmol/l
Platelets	241 * 10 ⁹ /l	K ⁺	5 mmol/l
WBC	5 * 10 ⁹ /l	Urea	18 mmol/l
Neuts	2 * 10 ⁹ /l	Creatinine	387 µmol/l
Ca ²⁺	2.24 mmol/l	Phos	1.1 mmol/l

Which medication should be added to control her hypertension?

	Amlodipine
	Bendroflumethiazide
	Furosemide
	Metolazone
	Ramipril

Overall score: **0%**

1 -

Question 99 of 144



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Which medication should be added to control her hypertension?

	Amlodipine
	Bendroflumethiazide
	Furosemide
	Metolazone
	Ramipril

Dashboard

Overall score: **0%**

1 -

Question 100 of 144

□ □

A 46 year-old man with a diagnosis of chronic hepatitis C is reviewed in renal clinic.

He had initially been referred via the hepatology clinic after blood results reveal raised urea and creatinine. A urine sample had revealed haematuria and proteinuria.

A renal biopsy had been arranged at the initial renal outpatients appointment.

The biopsy has revealed increased mesangial matrix and increased mesangial cellularity in the glomerulus.

What is the most likely diagnosis?

	Goodpasture's syndrome
	IgA nephropathy
	Membranoproliferative glomerulonephritis
	Granulomatosis with polyangiitis
	Systemic lupus erythematosus

Dashboard

Overall score: 0%

1 -

Question 100 of 144

□ □

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	Membranoproliferative glomerulonephritis
	Granulomatosis with polyangiitis
	Systemic lupus erythematosus

Dashboard

Overall score: **0%**

1 -

Question 101 of 144

□ □

A 30-year-old man with bipolar disorder is admitted with malaise and lethargy. He takes lithium regularly and complains of increased thirst and weakness.

His urine output is 4.5L in 24 hours.

Na ⁺	154 mmol/l
K ⁺	4.0 mmol/l
Urea	6.1 mmol/l
Creatinine	72 µmol/l
Calcium	2.47 mmol/l
Glucose	7.2 mmol/l
Urine Osmolarity	254 osmol/l (NR 500-800)

What is the most appropriate next step in management?

	5% Dextrose
	0.45% Saline
	Desmopressin
	Fluid restriction
	Thiazide diuretic

Overall score: **0%**

1 -

□ Question 101 of 144

□ □

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His urine output is 4.5L in 24 hours.

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Glucose	7.2 mmol/l
Urine Osmolarity	254 osmol/l (NR 500-800)

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	5% Dextrose
	0.45% Saline
	Desmopressin
	Fluid restriction
	Thiazide diuretic

Overall score: **0%**

1 -

Question 102 of 144



A 20-year-old gentleman goes to his GP complaining of haematuria on several occasions over the past year. Every episode occurred with an upper respiratory tract infection or a flu-like illness. There were no abnormalities on examination.

A urine dipstick test showed micro-haematuria with mild proteinuria. The patients urea and electrolytes were within normal range. Serum IgA was elevated.

Which of the following conditions is the most likely diagnosis?

	Berger disease
	Goodpasture syndrome
	Henoch-Schonlein purpura
	Minimal change disease
	Post-infectious glomerulonephritis

Dashboard

Overall score: 0%

1 -

Question 102 of 144

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A urine dipstick test showed micro-haematuria with mild proteinuria. The patients urea and electrolytes were within normal range. Serum IgA was elevated.

Which of the following conditions is the most likely diagnosis?

<input checked="" type="checkbox"/>	Berger disease
<input type="checkbox"/>	Goodpasture syndrome
<input type="checkbox"/>	Henoch-Schonlein purpura
<input type="checkbox"/>	Minimal change disease
<input type="checkbox"/>	Post-infectious glomerulonephritis

Dashboard

Overall score: **0%**

1 -

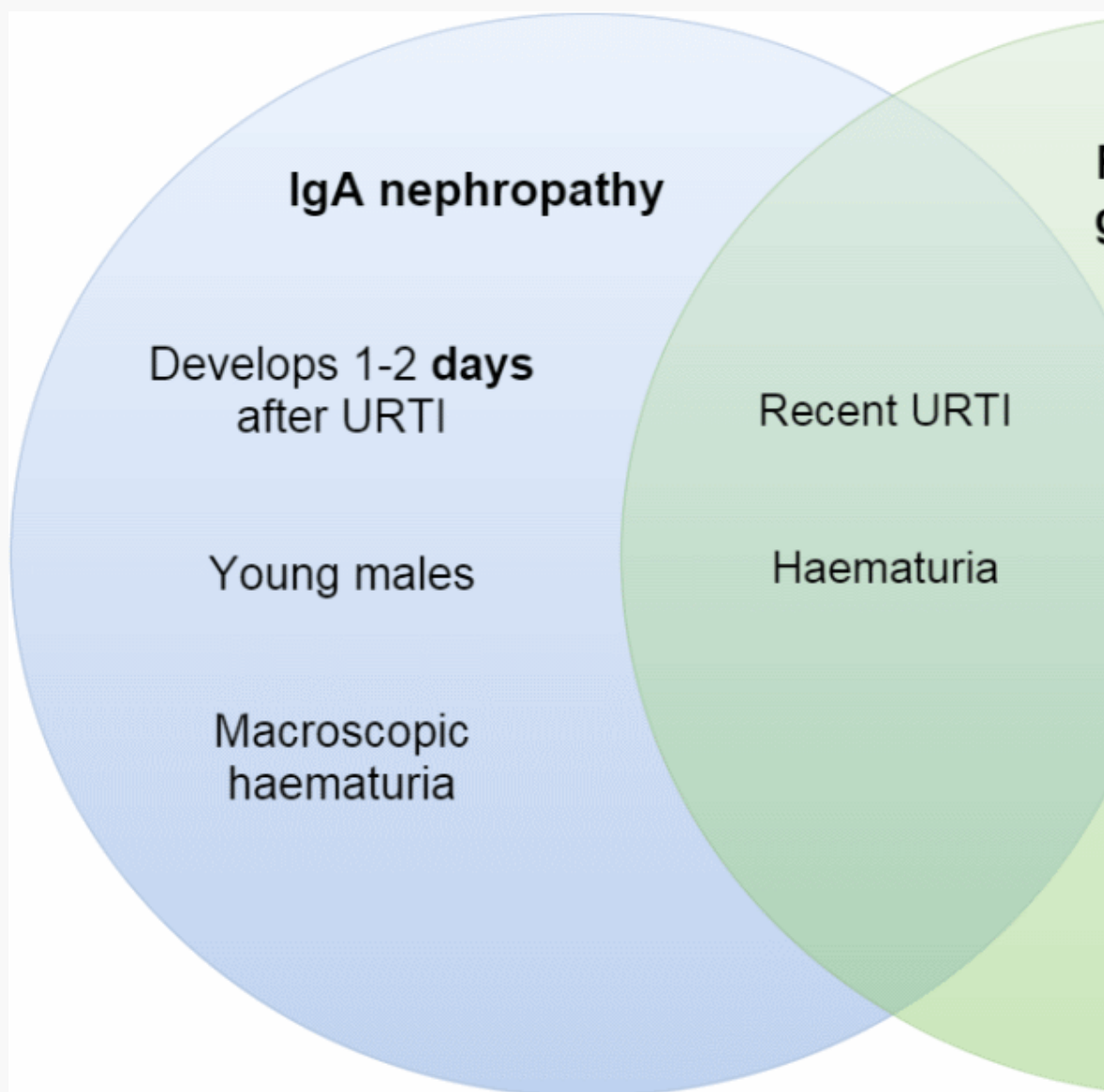
Question 102 of 144

A 20-year-old gentleman got a urinary tract infection (UTI) episode occurred with an upper urinary tract examination.

A urine dipstick test showed normal range. Serum IgA was normal.

Which of the following conditions is most likely to cause this presentation?

<input checked="" type="checkbox"/>	Berger disease
<input type="checkbox"/>	Goodpasture syndrome
<input type="checkbox"/>	Henoch-Schönlein purpura
<input type="checkbox"/>	Minimal change disease
<input type="checkbox"/>	Post-infectious glomerulonephritis



Dashboard

Overall score: 0%

1 -

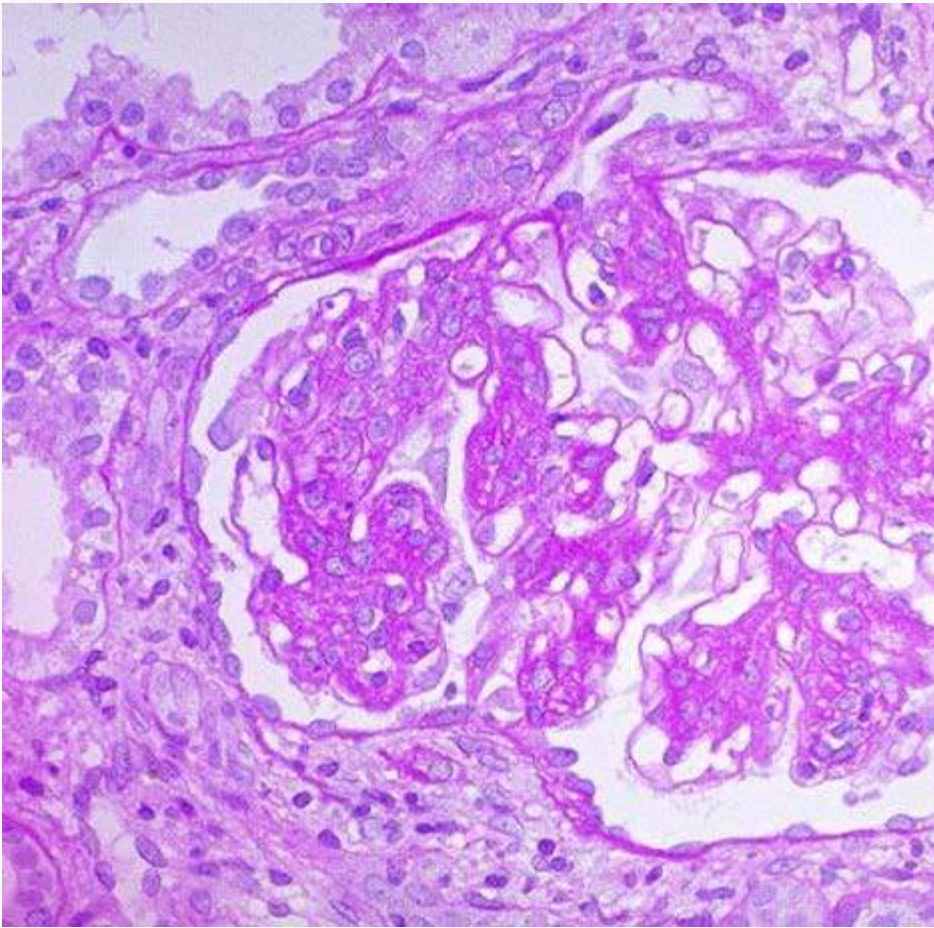
Question 102 of 144

A 20-year-old gentleman goes to his GP complaining of a recent episode occurred with an upper respiratory tract examination.

A urine dipstick test showed micro-haematuria normal range. Serum IgA was elevated.

Which of the following conditions is the most likely?

<input checked="" type="radio"/>	Berger disease
<input type="radio"/>	Goodpasture syndrome
<input type="radio"/>	Henoch-Schonlein purpura
<input type="radio"/>	Minimal change disease
<input type="radio"/>	Post-infectious glomerulonephritis



Dashboard

Overall score: 0%

1 -

Question 102 of 144

□ □

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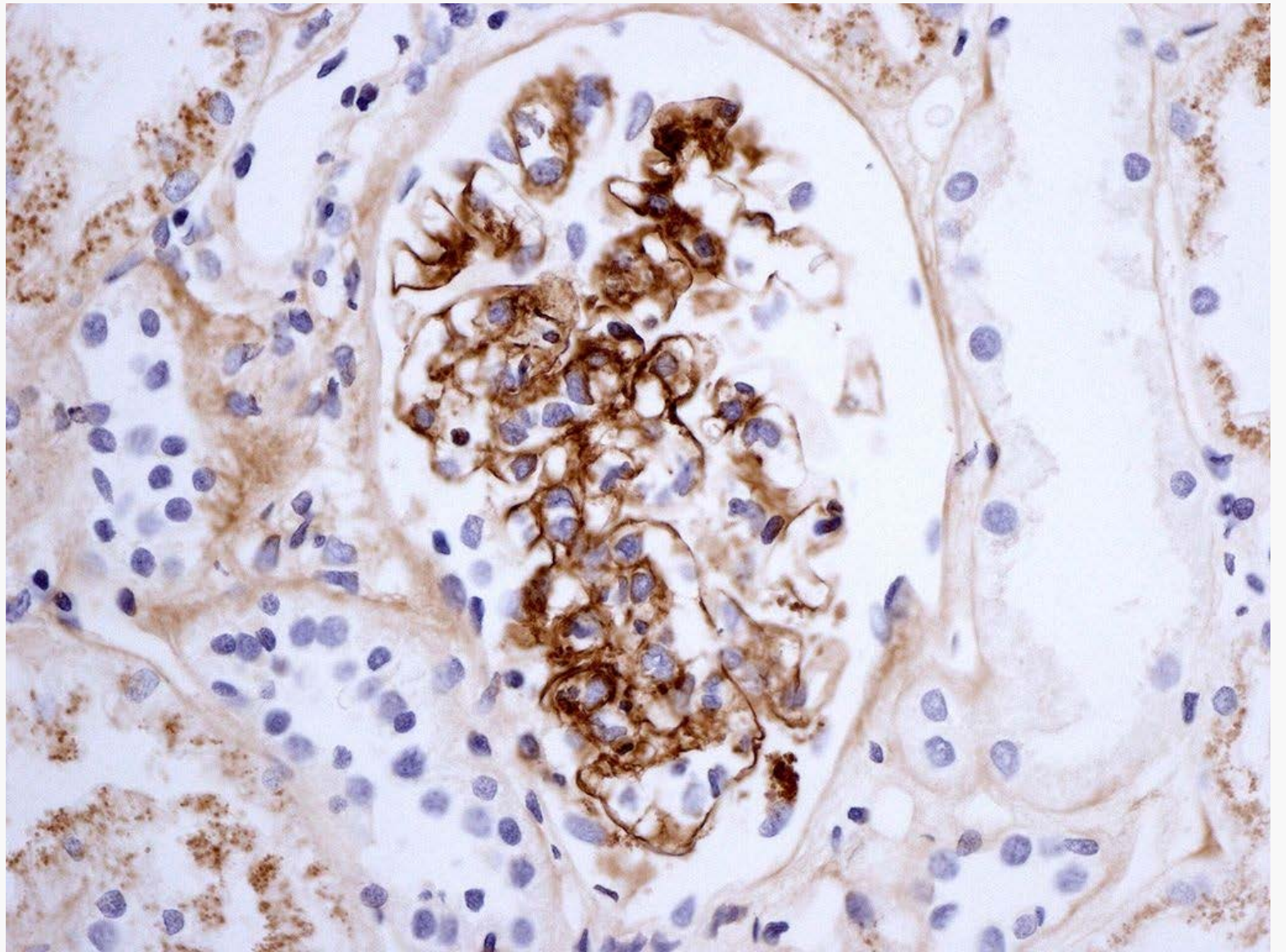
Which of the following conditions is the most likely diagnosis?

	Berger disease
	Goodpasture syndrome
	Henoch-Schonlein purpura
	Minimal change disease
	Post-infectious glomerulonephritis

Dashboard

Overall score: **0%**

1 -



□ Question 103 of 144



An 18-year-old man presents to the Emergency Department with a 3-hour history of severe left flank pain radiating to the groin. The pain is constant but waxes and wanes. He tells you he has had this pain before and that it is due to 'kidney stones'.

His electronic hospital record documents three previous admissions with ureteric calculi; the most recent episode requiring intervention with ureteric stents and lithotripsy. He takes no regular medications but consumes 3 litres of water per day on the advice of the urologists.

On examination, he is restless and pacing. He is afebrile, his pulse is 93bpm and his blood pressure is 148/79mmHg. His abdomen is soft but there is percussion tenderness over the left costovertebral angle. A plain abdominal film shows a semi-opaque, left proximal ureteric stone with a 'ground glass' appearance.

His 24-hour urine results are as follows:

Calcium	3.1 mmol/day (2.5 - 7.5)
Oxalate	0.28 mmol/day (0.11 - 0.46)
Phosphate	17.4mmol/day (15 - 20)
Urate	1.8mmol/day (1.5 - 4.5)
Cystine	1.9mmol/day (<0.13)
pH	7.5

Given the likely diagnosis, what is the most appropriate treatment?

	Allopurinol
	Potassium citrate
	Sodium bicarbonate

	D-penicillamine
	Bendroflumethiazide

Dashboard

Overall score: **0%**

1 -

Question 103 of 144



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	Sodium bicarbonate

	D-penicillamine
	Bendroflumethiazide

Dashboard

Overall score: **0%**
1 -

□ Question 104 of 144

□ □

A 32-year-old woman with a history of systemic lupus erythematosus and stable joint disease currently managed with hydroxychloroquine comes to the nephrology clinic. She complains of worsening peripheral oedema. Examination reveals a blood pressure of 159/88 mmHg, his pulse is 78 beats per minute and regular. There is pitting oedema of both lower limbs.

investigations

Na ⁺	141 mmol/l
K ⁺	5.1 mmol/l
Urea	8.1 mmol/l
Creatinine	159 µmol/l
Creatinine one month earlier	132 µmol/l
Urinary protein	5 g/24hrs

Which of the following is the most appropriate intervention with respect to long-term renal outcomes?

	Cyclophosphamide
	Methotrexate
	Methylprednisolone
	Mycophenolate
	Rituximab

Overall score: **0%**

1 -

Question 104 of 144



A 32-year-old woman with a history of systemic lupus erythematosus and stable joint disease currently managed with hydroxychloroquine comes to the nephrology clinic. She complains of worsening peripheral oedema. Examination reveals a blood pressure of 159/88 mmHg, his pulse is 78 beats per minute and regular. There is pitting oedema of both lower limbs.

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	Cyclophosphamide
	Methotrexate
	Methylprednisolone
	Mycophenolate
	Rituximab

Overall score: **0%**

1 -

Question 105 of 144

□ □

A 32-year-old female patient presents with a generalised maculopapular rash accompanied with fever and lower back pain. She has also noted swelling in both her legs. She had been seen by her GP three weeks ago and was given amoxicillin for a chest infection. A urinalysis was carried out and the result is shown below -

Urinalysis

Blood +++

White cells +++ (eosinophils+++)

No organisms seen

Glucose -

Nitrates -

Blood tests:

Hb	10.6 g/dl
MCV	86 fl
Platelets	$390 \times 10^9/l$
WBC	$9.2 \times 10^9/l$

Na ⁺	136 mmol/l
K ⁺	4.2 mmol/l
Urea	12.4 mmol/l
Creatinine	135 μ mol/l

What is the most likely diagnosis?

	Minimal change nephropathy

	Membranous glomerulonephritis
	Acute interstitial nephritis
	Drug-induced lupus
	Acute proliferative glomerulonephritis

Dashboard

Overall score: **0%**
1 -

Question 105 of 144

□ □

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Dashboard

Overall score: **0%**
1 -

Question 106 of 144

□ □

A 58-year-old man with a background of polycystic kidney disease has stage 5 chronic kidney disease. His regular blood tests have found the following:

Hb	130 g/l
Platelets	$160 \times 10^9/l$
WBC	$5 \times 10^9/l$

Calcium	2.3 mmol/l
Phosphate	1.7 mmol/l

What is the best next step given he claims compliance with a renal diet?

	Lanthanum carbonate
	Calcium acetate
	Sevelamer hydrochloride
	Reinforce dietary advice
	Calcium carbonate

Dashboard

Overall score: 0%

1 -

Question 106 of 144

□ □

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	Calcium acetate
	Sevelamer hydrochloride
	Reinforce dietary advice
	Calcium carbonate

Dashboard

Overall score: **0%**

1 -

Question 107 of 144

□ □

A 21-year-old woman presents to the Emergency department following a collapse at the local supermarket. She tells you that she always feels weak and washed out, and hardly ever has any energy. She takes no regular medication and virtually never sees the doctor. On examination her blood pressure is 100/70 mmHg, pulse is 80 beats per minute and regular. She is slim with a body mass index of 21 kg/m², no abnormal physical signs are noted.

Investigations

Na ⁺	140 mmol/l
K ⁺	3.1 mmol/l
HCO ₃ ⁻	32 mmol/l
Urea	5.9 mmol/l
Creatinine	85 µmol/l

Which of the following is the most likely diagnosis?

	Conn's syndrome
	Cushing's syndrome
	Gitelman's syndrome
	Liddle's syndrome
	Renal tubular acidosis type 1

Dashboard

Overall score: 0%

□ Question 107 of 144

□ □

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	Cushing's syndrome
	Gitelman's syndrome
	Liddle's syndrome
	Renal tubular acidosis type 1

Dashboard

Overall score: 0%

□ Question 108 of 144

□ □

A 27-year-old woman with chronic kidney disease stage 5 secondary to focal segmental glomerulosclerosis presents with left forearm pain. This has been getting gradually worse over the past few weeks and is no longer controlled with a combination of paracetamol and codeine. An x-ray of the left forearm is shown below:





© Image used on license from Radiopaedia



What is the most likely cause of this appearance?

	Sarcoma
	Osteomyelitis
	Secondary hyperparathyroidism
	Fibrous dysplasia
	Complication of phosphate binder therapy

Dashboard

Overall score: **0%**

1 -

□ Question 108 of 144

□ □

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	Sarcoma
	Osteomyelitis
	Secondary hyperparathyroidism
	Fibrous dysplasia
	Complication of phosphate binder therapy

Dashboard

Overall score: **0%**

1 -

□ Question 109 of 144



A 21-year-old male with end stage renal failure who had undergone a cadaveric renal transplant 8 weeks previously presented with haematuria and a decline in his graft function from a serum creatinine of 110 $\mu\text{mol/L}$ to 320 $\mu\text{mol/L}$. He developed renal failure and sensorineural deafness in childhood. He was compliant with his current medications which included prednisolone, tacrolimus and cyclophosphamide. Three of his maternal uncles had developed renal failure in their teenage years.

On examination, he appeared well but pale with a scar in the left iliac fossa and a palpable, tender renal graft. His temperature was 37.2 degrees Celsius, his pulse was 85 beats per minute and regular, his blood pressure was 112/75 mmHg, his respiratory rate was 18 breaths per minute and his oxygen saturations were 97% on room air.

Investigations:

Urine dip: blood+++, protein++

Haemoglobin	95 g/L
White cell count	$7.7 \times 10^9/\text{L}$
Platelet Count	$181 \times 10^9/\text{L}$
INR	0.9
Serum sodium	141mmol/L
Serum potassium	5.1mmol/L
Serum urea	20.4mmol/L
Serum creatinine	320micromol/L
CRP	24 mg/L

Renal transplant ultrasound scan: The renal transplant lies in the left iliac fossa. It is normal in size with increased cortical echo texture. There is no hydronephrosis. Doppler studies demonstrate good arterial and venous flow.

What is the most likely reason for the decline in graft function?

	Cytomegalovirus infection
	Urinary tract infection
	Anti-glomerular basement membrane antibodies
	Dehydration
	Urinary calculi

Dashboard

Overall score: **0%**

1 -

□ Question 109 of 144



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	Dehydration
	Urinary calculi

Dashboard

Overall score: **0%**
1 -

□ Question 110 of 144



A 65-year-old man is admitted with central chest pain that has been ongoing for two hours. It radiates to the left arm and is associated with nausea and vomiting. He has a past medical history of hypertension and diabetes which is diet controlled. He takes amlodipine and atorvastatin.

On examination his blood pressure is 147/89 mmHg and his heart rate is 110 beats per minute. His saturations are 96% on room air and he is afebrile. His cardiovascular and respiratory examinations are unremarkable.

An ECG shows T wave inversion in leads I, V4, V5 and V6.

Blood tests are as follows:

Hb	131 g/l	Na ⁺	136 mmol/l
Platelets	430 * 10 ⁹ /l	K ⁺	4 mmol/l
WBC	8 * 10 ⁹ /l	Urea	4 mmol/l
Neuts	6 * 10 ⁹ /l	Creatinine	84 µmol/l
Lymphs	1 * 10 ⁹ /l	CRP	41 mg/l
Eosin	0.3 * 10 ⁹ /l	Trop	130 ng/l

He is diagnosed with non-ST elevation myocardial infarction and commenced on aspirin, clopidogrel and low molecular weight heparin. His pain settles with morphine and glyceryl trinitrate spray within an hour. The following day he is commenced on ramipril and bisoprolol. 3 days later he undergoes an uncomplicated angiogram with stenting of the left circumflex artery.

On systems reviews prior to discharge he comments that he has noticed a rash on his legs and has not been passing much urine despite drinking plenty of water. On examination he has a bluish lacey discolouration over his legs. He has no palpable bladder.

Repeat bloods are as follows:

Hb	12.1 g/l	Na ⁺	137 mmol/l
----	----------	-----------------	------------

Platelets	560 * 10 ⁹ /l	K ⁺	5 mmol/l
WBC	10 * 10 ⁹ /l	Urea	12 mmol/l
Neuts	7 * 10 ⁹ /l	Creatinine	184 µmol/l
Lymphs	1.2 * 10 ⁹ /l	CRP	60 mg/l
Eosin	1.5 * 10 ⁹ /l		

What is the most likely cause of his symptoms and deranged blood tests?

	Cholesterol embolism
	Contrast nephropathy
	Endocarditis
	Hypovolaemia during NSTEMI
	Newly started ACE inhibitor

Dashboard

Overall score: 0%

1 -

□ Question 110 of 144



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	Cholesterol embolism
	Contrast nephropathy
	Endocarditis
	Hypovolaemia during NSTEMI
	Newly started ACE inhibitor

Dashboard

Overall score: **0%**
1 -

Question 111 of 144

□ □

A 67-year-old woman is referred to the Emergency department by her GP because of an acute rise in serum creatinine. She has a history of Type 2 diabetes and takes lisinopril, amlodipine and indapamide as well as metformin and simvastatin, and has recently been prescribed trimethoprim for a UTI. Her blood pressure is 148/84 mmHg, with no postural drop on standing. There are no signs of fluid overload.

Na ⁺	140 mmol/l
K ⁺	4.9 mmol/l
Urea	5.8 mmol/l
Creatinine	162 µmol/l
Creatinine (one month earlier)	112 µmol/l

Which of the following is the most likely cause of her creatinine elevation?

	Amlodipine
	Lisinopril
	Post-renal failure
	Pre-renal failure
	Trimethoprim

Dashboard

Overall score: 0%

1 -

□ Question 111 of 144

□ □

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Urea	5.8 mmol/l
Creatinine	162 µmol/l
Creatinine (one month earlier)	112 µmol/l

Which of the following is the most likely cause of her creatinine elevation?

	Amlodipine
	Lisinopril
	Post-renal failure
	Pre-renal failure
	Trimethoprim

Dashboard

Overall score: **0%****1** -

□ Question 112 of 144

□ □

A 51 year-old man presents with a twelve hour history of generalised abdominal pain, nausea and vomiting. The abdominal pain has been increasing in severity to a 6/10 on the pain scale and there is evidence of guarding. The patient is currently on peritoneal dialysis for end-stage renal failure and he has noticed cloudy peritoneal bags over the last six hours. He is on ramipril, alfacalcidol, erythropoietin and simvastatin and is allergic to penicillin. His observations are all stable and peritoneal dialysis fluid has been sent off for microscopy, culture and sensitivity.

What is the next most appropriate management of this patient?

<input type="checkbox"/>	Give IV co-amoxiclav
<input type="checkbox"/>	Arrange immediate removal of catheter
<input type="checkbox"/>	Swab catheter site and give erythromycin
<input type="checkbox"/>	Give intra-peritoneal vancomycin and gentamicin
<input type="checkbox"/>	Perform a sepsis screen and await peritoneal dialysis fluid microscopy result

Dashboard

Overall score: 0%

1 -

□ Question 112 of 144

□ □

A 51 year-old man presents with a twelve hour history of generalised abdominal pain, nausea and vomiting. The abdominal pain has been increasing in severity to a 6/10 on the pain scale and there is evidence of guarding. The patient is currently on peritoneal dialysis for end-stage renal failure and he has noticed cloudy peritoneal bags over the last six hours. He is on ramipril, alfacalcidol, erythropoietin and simvastatin and is allergic to penicillin. His observations are all stable and peritoneal dialysis fluid has been sent off for microscopy, culture and sensitivity.

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	Arrange immediate removal of catheter
	Swab catheter site and give erythromycin
	Give intra-peritoneal vancomycin and gentamicin
	Perform a sepsis screen and await peritoneal dialysis fluid microscopy result

Dashboard

Overall score: **0%****1** -

□ Question 113 of 144



A 72-year-old man presents to the Emergency Department with worsening shortness of breath over the last three days. He denies any history of angina or orthopnoea and denies any recent fever. He has a slight cough over the last week and yesterday noted a small amount of blood in his otherwise clear sputum. His past medical history includes type two diabetes mellitus for which he takes metformin and gliclazide. On a more detailed systems review, he admits to feeling generally run down over the last week and has noticed he hasn't been passing much urine in the last two days.

On examination, he is breathless at rest with a respiratory rate of 26 breaths/min, oxygen saturations of 88% on air and a few scattered crepitations on auscultation. His heart rate is 95 beats/min, his blood pressure 169/102 mmHg and his capillary refill time is less than three seconds. His heart sounds are normal, there is no significant peripheral oedema and his mucous membranes are moist. His abdomen is soft to palpation and there is no organomegaly. After urinary catheterization only a small amount of urine is passed and the nurse reports it only showed protein and blood. A chest x-ray reveals widespread patchy infiltrates.

Hb	105 g/l
Platelets	$490 \times 10^9/l$
WBC	$8.5 \times 10^9/l$
Na ⁺	139 mmol/l
K ⁺	5.1 mmol/l
Urea	31.5 mmol/l
Creatinine	894 μ mol/l

What is the most appropriate treatment?

	Plasmapheresis
	Crystalloid infusion
	Haemofiltration

	High dose steroids
	Dialysis

Dashboard

Overall score: **0%**
1 -

□ Question 113 of 144



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Creatinine	894 μ mol/l

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	Plasmapheresis
	Crystalloid infusion
	Haemofiltration

	High dose steroids
	Dialysis

Dashboard

Overall score: **0%**
1 -

Question 114 of 144

□ □

A patient presents to the MAU with a worsening dyspnoea. He has a past history only significant for chronic hepatitis B for which he receives regular follow up but is currently on no treatment. Further examination shows widespread oedema with peripheral oedema extending to involve the scrotum and abdominal wall.

Urinalysis

Blood -
Protein +++
Glucose +
White cells -

Blood results:

Hb	9.8 g/dl
Platelets	$540 \times 10^9/l$
WBC	$10.2 \times 10^9/l$
ESR	72 mm/hr

Na ⁺	133 mmol/l
K ⁺	4.8 mmol/l
Urea	18.9 mmol/l
Creatinine	220 μ mol/l
CRP	6mg/l

Chest X-Ray	Normal
-------------	--------

What is the most likely diagnosis?

--	--

	Hepato-renal syndrome
	Membranous glomerulonephritis
	Rapidly progressive glomerulonephritis
	Focal segmental glomerulonephritis
	Minimal change disease

Dashboard

Overall score: **0%**

1 -

Question 114 of 144

□ □

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Dashboard

Overall score: **0%**
1 -

Question 114 of 144

A patient presents to the MAU with a worsening of his symptoms for which he receives regular follow up but is complicated with peripheral oedema extending to involve the lower limbs.

Urinalysis

Blood -
Protein +++
Glucose +
White cells -

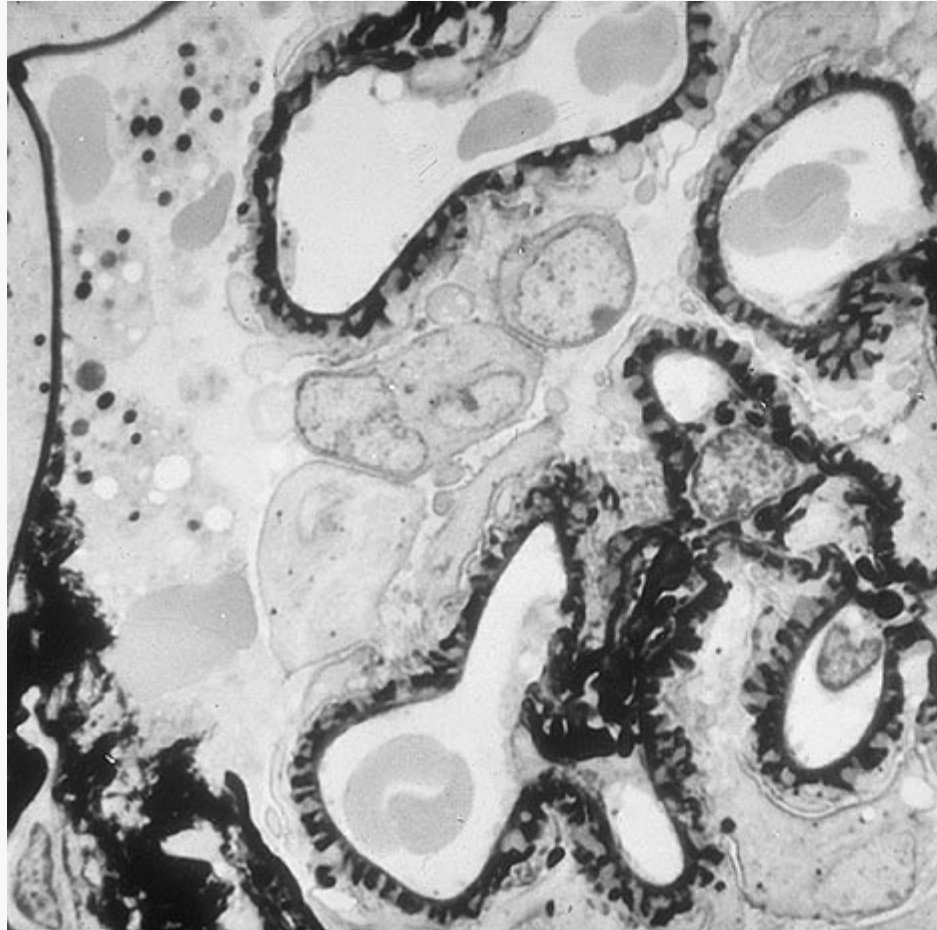
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	Rapidly progressive glomerulonephritis
	Focal segmental glomerulonephritis
	Minimal change disease

Dashboard

Overall score: **0%**

1 -

□ Question 115 of 144

□ □

A 45-year-old man presents to the Emergency Department complaining of loin pain and passing blood in his urine. This is not the first time he has had similar symptoms but they are generally not as severe. The pain is concentrated around the left loin region and is described as 'dull' and 6/10 in terms of severity. He is generally fit and well but is currently awaiting ambulatory blood pressure monitoring by his GP as he had a borderline blood pressure at a recent medical.

He has recently been on holiday in Greece. He works as a car mechanic and drinks around 30 units of alcohol per week.

Blood tests in the Emergency Department show the following:

Hb	13.9 g/dl	Na ⁺	141 mmol/l
Platelets	286 * 10 ⁹ /l	K ⁺	4.8 mmol/l
WBC	6.9 * 10 ⁹ /l	Urea	6.9 mmol/l
		Creatinine	109 µmol/l
		CRP	14 mg/l

A presumed diagnosis of renal colic is made and a CT requested:



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What is the most likely underlying diagnosis?

	Metastatic renal cell cancer
	Pseudomyxoma peritonei
	Autosomal dominant polycystic kidney disease
	Hydatid disease
	Medullary cystic disease

Dashboard

Overall score: 0%

1 -

□ Question 115 of 144

□ □

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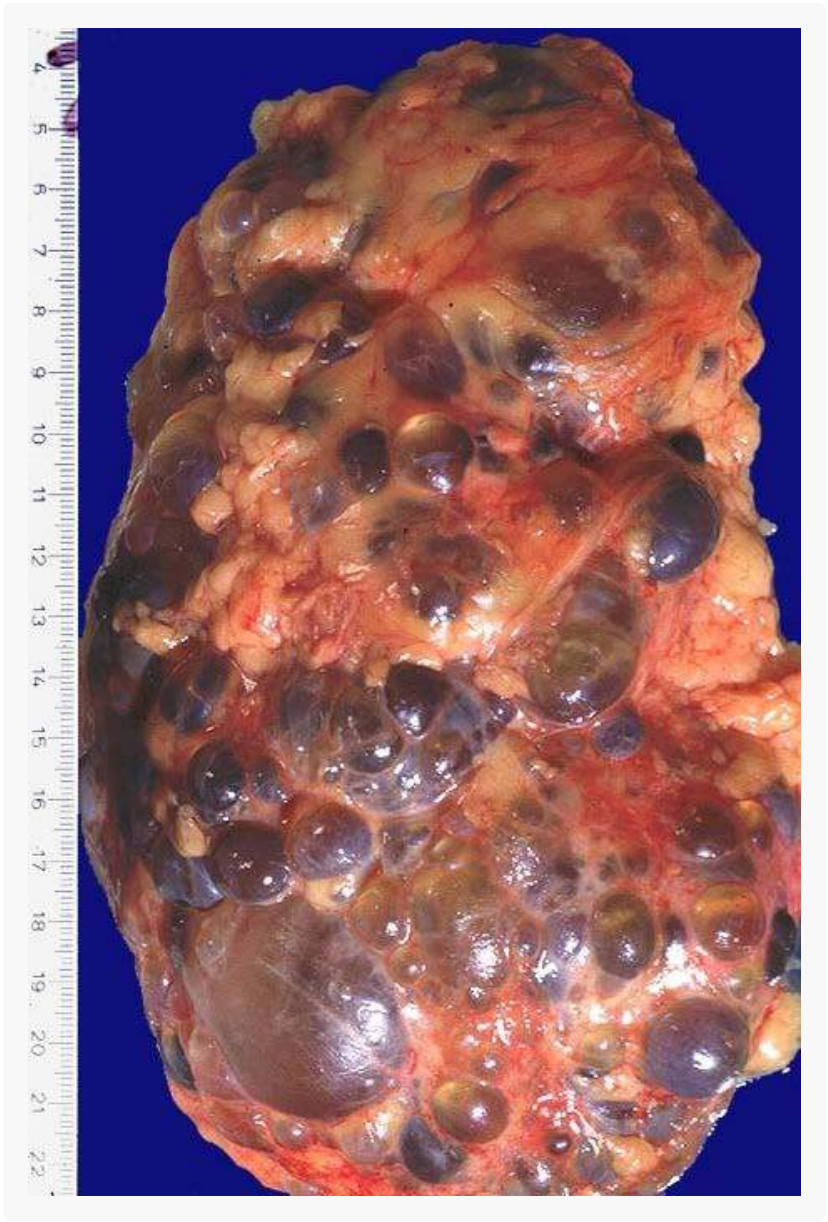
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Dashboard

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1 -



□ Question 115 of 144

□ □

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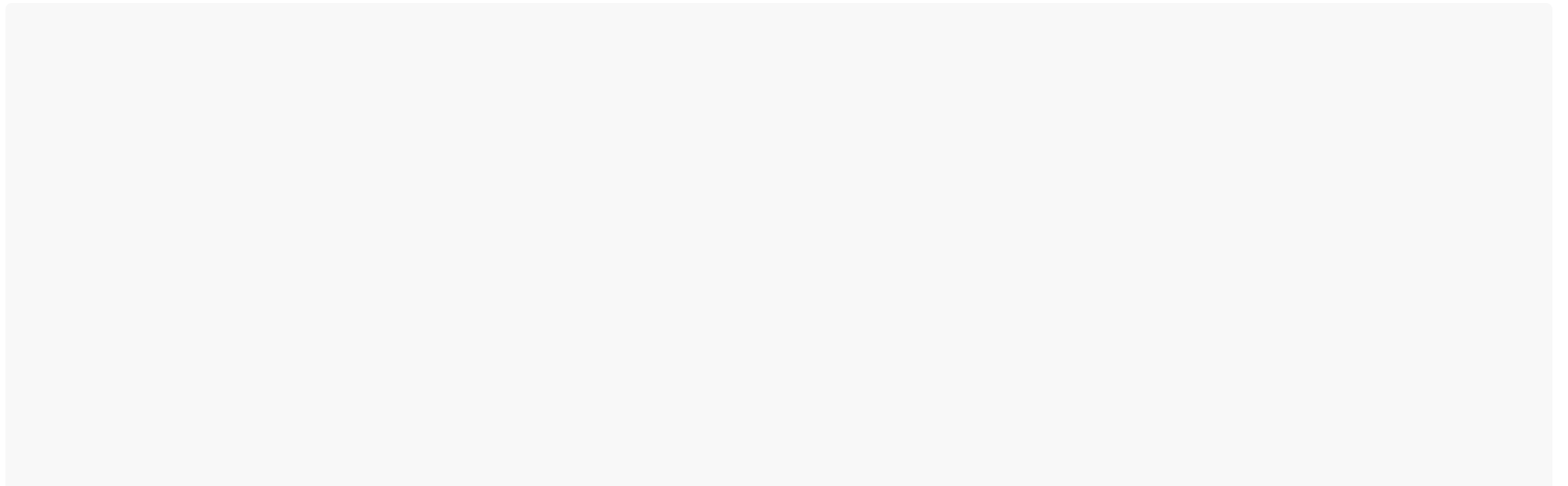
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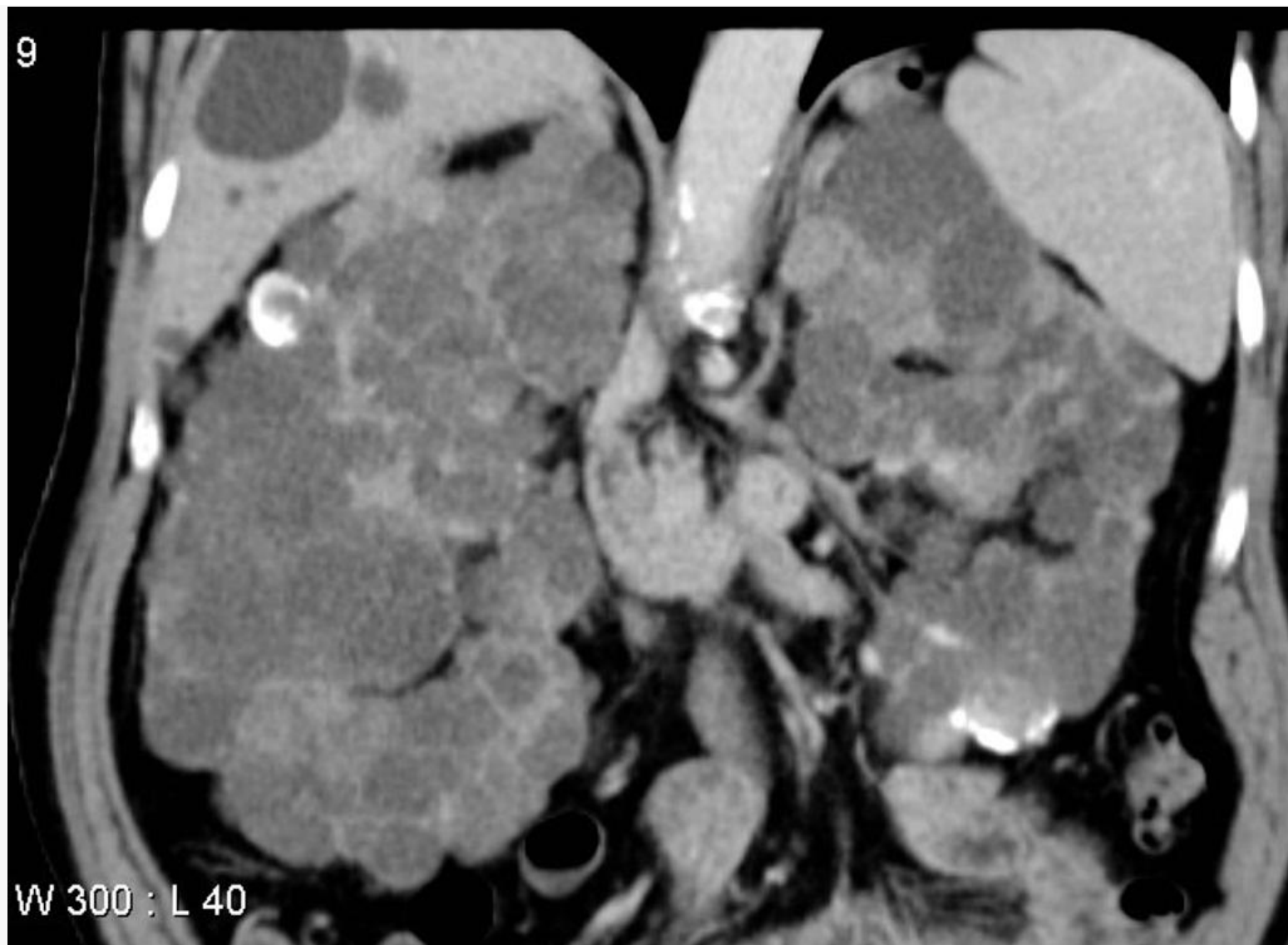
Dashboard

Overall score: 0%

1 -



9



W 300 : L 40

□ Question 115 of 144

□ □

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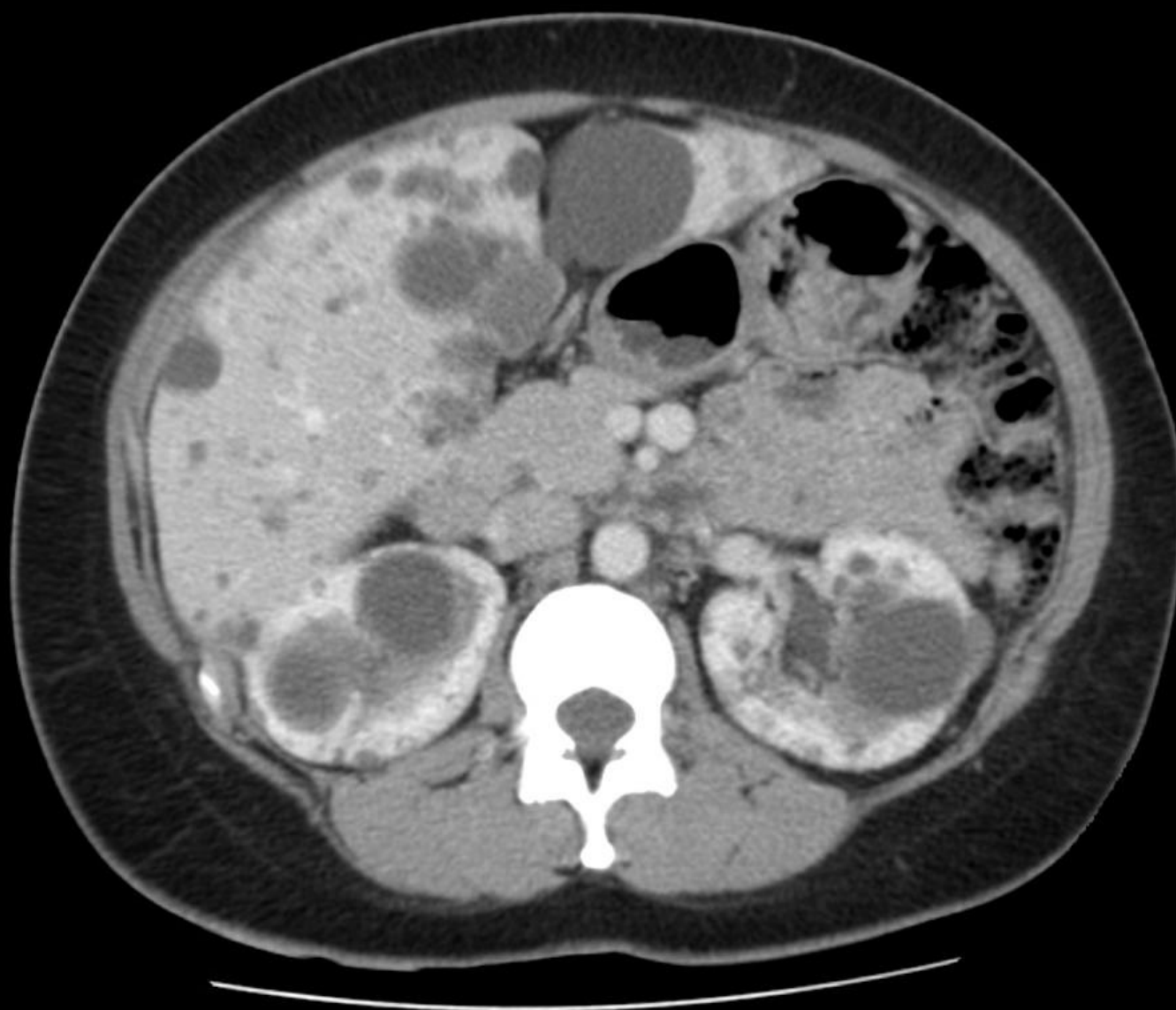
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	Metastatic renal cell cancer
	Pseudomyxoma peritonei
	Autosomal dominant polycystic kidney disease
	Hydatid disease
	Medullary cystic disease

Dashboard

Overall score: 0%

1 -



Question 116 of 144

□ □

A 42-year-old woman of Afro-Caribbean ethnicity is admitted to hospital after a two-week history of non-specific fatigue and worsening lower limb swelling. She was diagnosed with systemic lupus erythematosus 6 years ago and over the 6 months, her creatinine has been slowly rising from 120 $\mu\text{mol/l}$ to 260 $\mu\text{mol/l}$.

On examination, her blood pressure is 180/118 mmHg, she has significant swelling of ankles and feet, with periorbital oedema. A urine dip demonstrated 4+ protein and a 24 hour urine collection collected 4.6g protein. She undergoes a renal biopsy under the renal physicians, demonstrating membranous lupus nephritis. In addition to angiotensin-converting enzyme inhibitors, statins and anti-hypertensives, what is the most appropriate immediate treatment?

	Monitor
	PO prednisolone alone
	IV methylprednisolone alone
	IV methylprednisolone and IV cyclophosphamide
	Plasmaphoresis

Dashboard

Overall score: 0%

1 -

Question 116 of 144

□ □

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	Monitor
	PO prednisolone alone
	IV methylprednisolone alone
	IV methylprednisolone and IV cyclophosphamide
	Plasmaphoresis

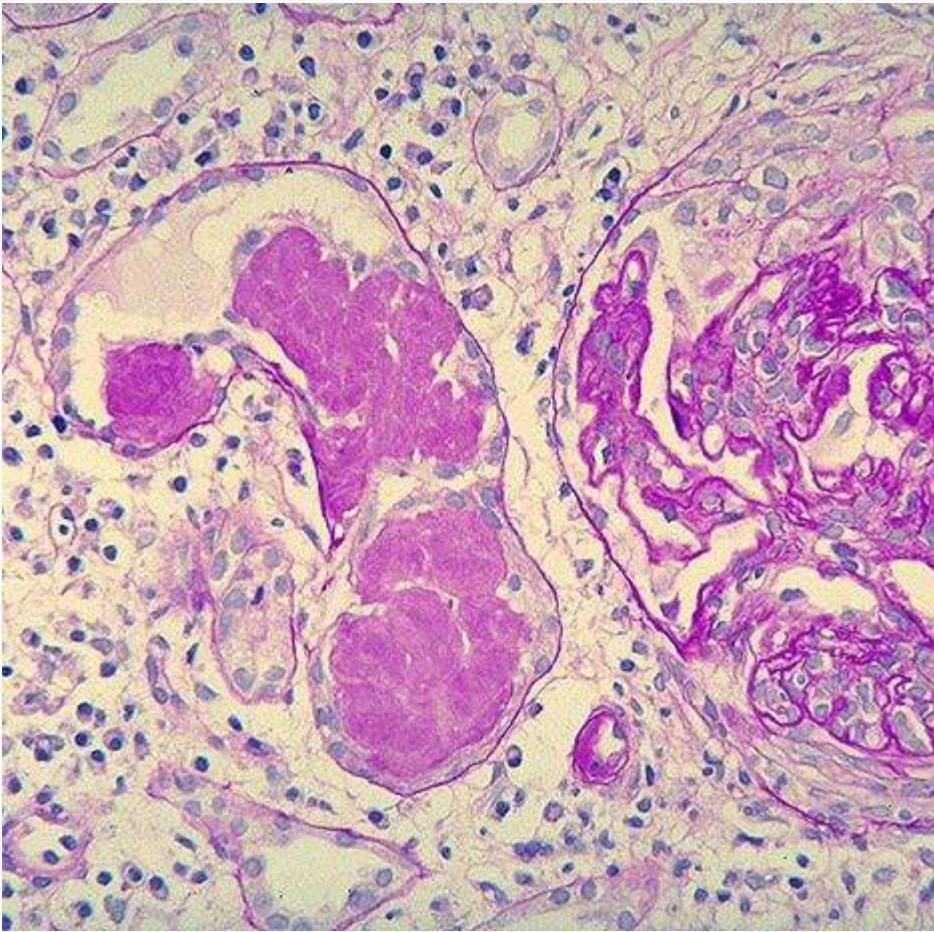
Dashboard

Overall score: 0%

1 -

Question 116 of 144

A 42-year-old woman of Afro-Caribbean ethnicity presents with progressive and worsening lower limb swelling. She was diagnosed with hypertension 10 months ago. Over the last 6 months, her creatinine has been slowly rising from 120 to 180 µmol/L. On examination, her blood pressure is 180/118 mmHg, and there is 2+ lower limb oedema. A urine dip demonstrated 4+ protein and 2+ haematuria. She underwent a renal biopsy under the renal physicians, demonstrating glomerular disease. She is currently on converting enzyme inhibitors, statins and anti-hypertensives.



	Monitor
	PO prednisolone alone
	IV methylprednisolone alone
	IV methylprednisolone and IV cyclophosphamide
	Plasmaphoresis

Dashboard

Overall score: 0%

1 -

□ Question 117 of 144



A 30-year-old woman with a background of systemic lupus erythematosus presents to the emergency department with fatigue and poor urine output.

On examination, she is jaundiced, with a petechial rash affecting her lower limbs which is non-tender to palpation. She is afebrile, mildly tachycardiac with a heart rate of 95/min and is normotensive.

Bloods:

Hb	50 g/l	Na ⁺	135 mmol/l
Platelets	30 × 10 ⁹ /l	K ⁺	4.9 mmol/l
WBC	11 × 10 ⁹ /l	Urea	6 mmol/l
Neuts	6 × 10 ⁹ /l	Creatinine	300 µmol/l
Lymphs	3 × 10 ⁹ /l	CRP	25 mg/l
Eosin	0 × 10 ⁹ /l		

What is the most appropriate definitive management?

	Transfusion of packed red cells
	Intravenous fluids
	Rituximab
	Pulsed methylprednisolone
	Plasma exchange

Overall score: **0%**

1 -

□ Question 117 of 144

□ □

A 30-year-old woman with a background of systemic lupus erythematosus presents to the emergency department with fatigue and poor urine output.

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WBC	11 * 10 ⁹ /l	Urea	6 mmol/l
Neuts	6 * 10 ⁹ /l	Creatinine	300 µmol/l
Lymphs	3 * 10 ⁹ /l	CRP	25 mg/l
Eosin	0 * 10 ⁹ /l		

What is the most appropriate definitive management?

	Transfusion of packed red cells
	Intravenous fluids
	Rituximab
	Pulsed methylprednisolone
	Plasma exchange

Overall score: **0%**

1 -

□ Question 118 of 144

□ □

You review a 65-year-old gentleman in the renal outpatients clinic with diabetic nephropathy. He has opted for hospital haemodialysis and is awaiting fistula creation. He complains of tiredness and poor exercise tolerance. He is clinically euvolaemic. His blood results are as follows:

Na ⁺	134 mmol/l
K ⁺	5.6 mmol/l
HCO ₃ ⁻	21 mmol/l
Urea	29 mmol/l
Creatinine	480 µmol/l
Hb	89 g/l
MCV	81 fL
Ferritin	500 ng/mL

What would be the best management of his anaemia?

	Ferric carboxymaltose (IV iron)
	Oral ferrous sulphate
	Erythropoietin (intravenous)
	Erythropoietin (subcutaneous)
	Regular blood transfusion

Overall score: **0%**

1 -

Question 118 of 144

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	Oral ferrous sulphate
	Erythropoietin (intravenous)
	Erythropoietin (subcutaneous)
	Regular blood transfusion

Overall score: **0%**

1 -

□ Question 119 of 144

□ □

A 62-year-old woman with a history of type 1 diabetes and end stage renal failure comes to the renal clinic for review. Over the past few months she has been feeling increasingly lethargic with proximal muscle pains and weakness. She is managed with a basal bolus insulin regime, Examination reveals a blood pressure of 155/82 mmHg, pulse is 70 beats per minute and regular. Chest is clear, there is no ankle swelling. Abdomen is soft and non-tender. You confirm proximal muscle weakness.

Investigations

Hb	101 g/l	Na ⁺	137 mmol/l	Bilirubin	11 µmol/l
Platelets	95 * 10 ⁹ /l	K ⁺	3.7 mmol/l	ALP	185 u/l
WBC	8.4 * 10 ⁹ /l	Urea	13.2 mmol/l	ALT	23 u/l
Neuts	5.1 * 10 ⁹ /l	Creatinine	382 µmol/l	γGT	57 u/l
Lymphs	2.1 * 10 ⁹ /l	Ca ⁺⁺	2.1 mmol/l	Albumin	30 g/l

You suspect that she has secondary hyperparathyroidism. At what level of PTH would you begin supplementation with calcium and vitamin D?

	In the normal range
	Just above the normal range
	Twice the normal range
	Three times the normal range
	Four times the normal range

Overall score: **0%**

1 -

□ Question 119 of 144

□ □

A 62-year-old woman with a history of type 1 diabetes and end stage renal failure comes to the renal clinic for review. Over the past few months she has been feeling increasingly lethargic with proximal muscle pains and weakness. She is managed with a basal bolus insulin regime, Examination reveals a blood pressure of 155/82 mmHg, pulse is 70 beats per minute and regular. Chest is clear, there is no ankle swelling. Abdomen is soft and non-tender. You confirm proximal muscle weakness.

Investigations

Hb	101 g/l	Na ⁺	137 mmol/l	Bilirubin	11 µmol/l
Platelets	95 * 10 ⁹ /l	K ⁺	3.7 mmol/l	ALP	185 u/l
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Lymphs	2.1 * 10 ⁹ /l	Ca ⁺⁺	2.1 mmol/l	Albumin	30 g/l

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	In the normal range
	Just above the normal range
	Twice the normal range
	Three times the normal range
	Four times the normal range

Overall score: **0%**

1 -

Question 120 of 144

□ □

A 32 year old gentleman presented to your acute medical unit with right flank pain. The pain started 2 weeks ago and has been constant. He has tried paracetamol tablets but this has not relieved the pain. He denies any dysuria and is otherwise fit and well. He is a smoker and tells you that his sister recently died from a subarachnoid haemorrhage, which was caused by a berry aneurysm.

He is tachycardic at 110 bpm but other observations are normal. Urine dipstick has 2+ blood, nil else. His blood tests reveal a Sodium 141 mmol/l, Potassium 4.6 mmol/l, Urea 3.6 mmol/l, Creatinine 84µmol/l, CRP 34mg/l. His FBC is normal.

What is the most likely diagnosis?

	Renal stone
	Pyelonephritis
	Renal cell carcinoma
	Polycystic kidney disease
	Wilms' tumour

Dashboard

Overall score: 0%

1 -

Question 120 of 144

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What is the most likely diagnosis?

<input type="radio"/>	Renal stone
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<input type="radio"/>	Renal cell carcinoma
<input checked="" type="radio"/>	Polycystic kidney disease
<input type="radio"/>	Wilms' tumour

Dashboard

Overall score: **0%**

1 -

□ Question 120 of 144

□ □

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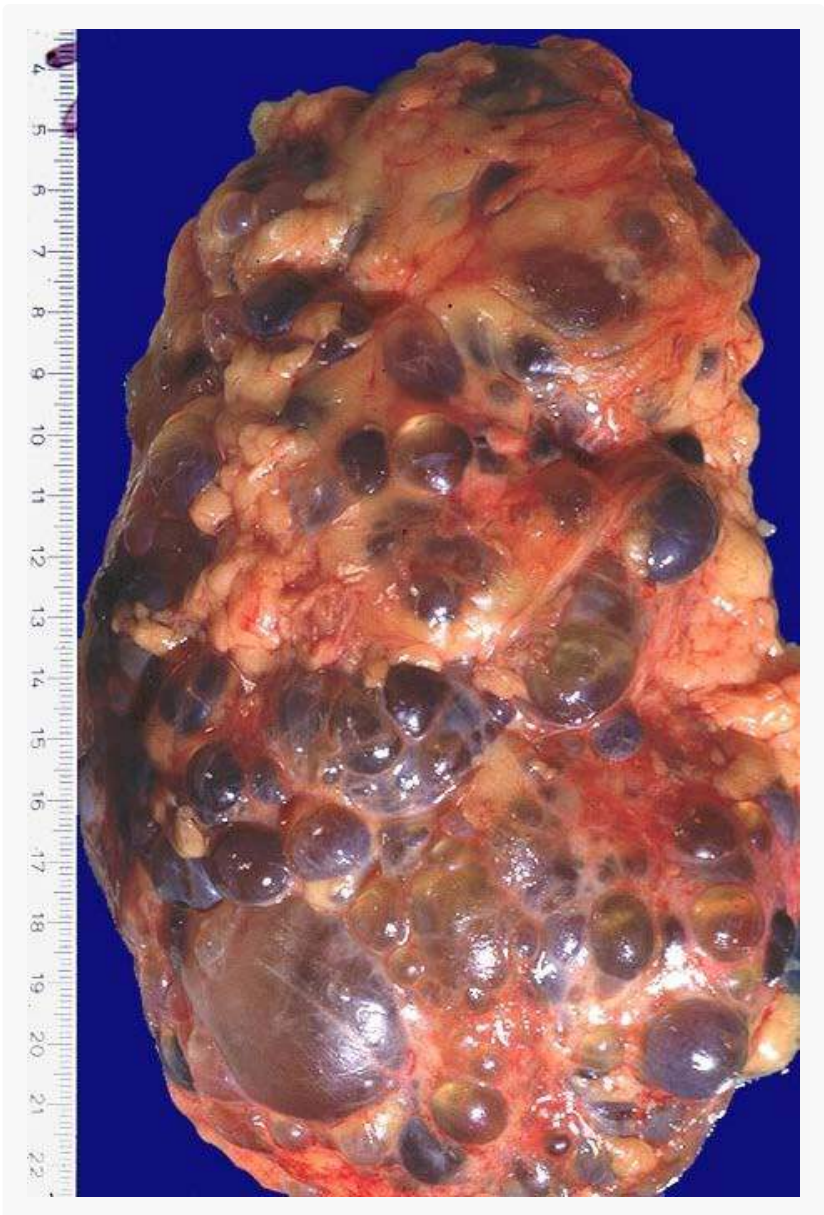
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	Pyelonephritis
	Renal cell carcinoma
	Polycystic kidney disease
	Wilms' tumour

Dashboard

Overall score: **0%**

1 -



□ Question 120 of 144

□ □

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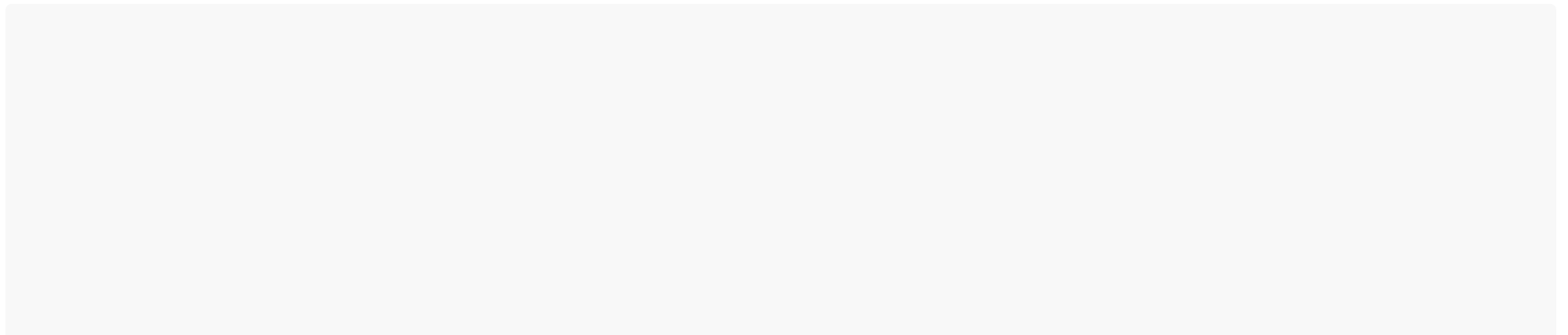
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	Polycystic kidney disease
	Wilms' tumour

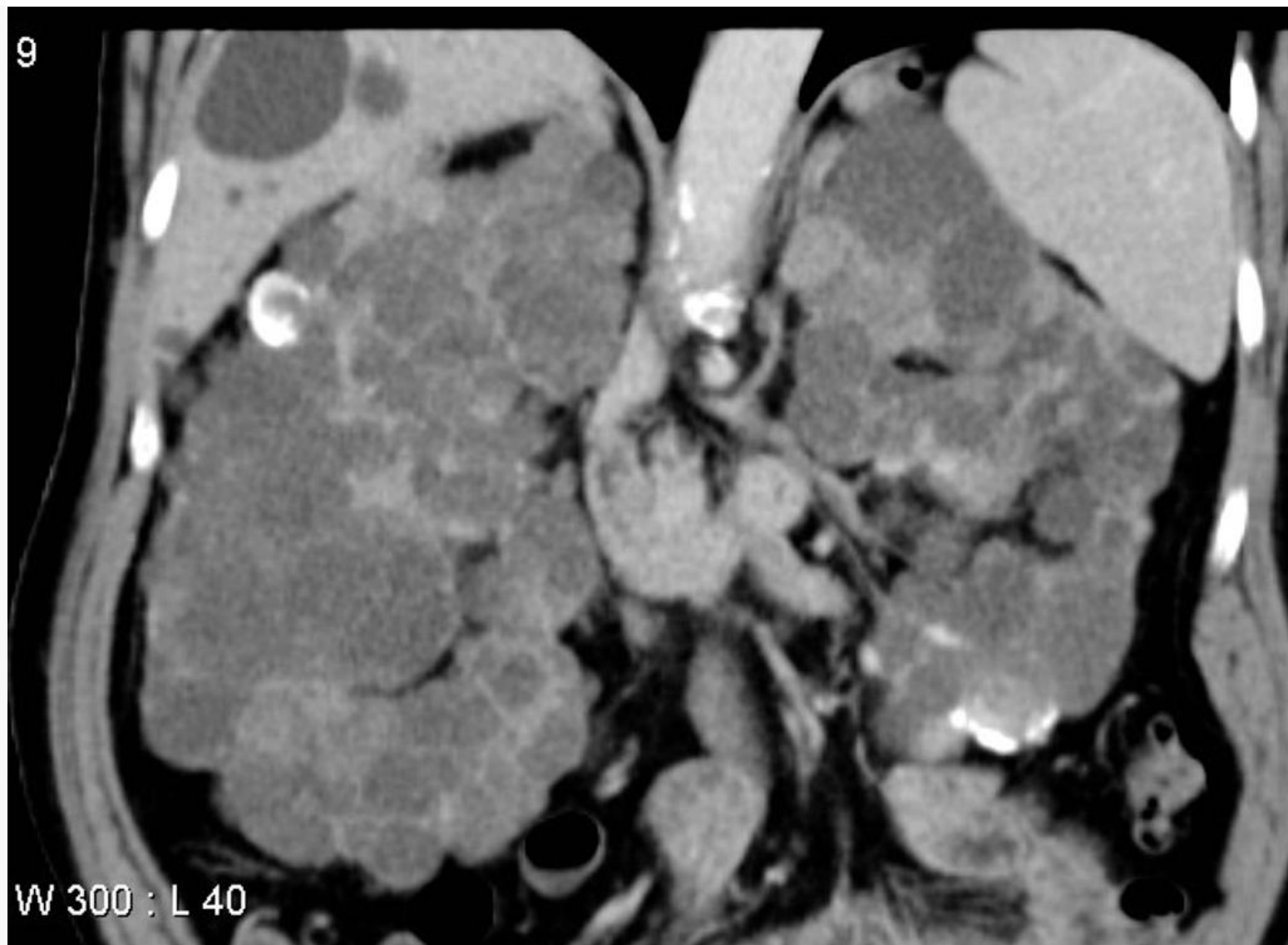
Dashboard

Overall score: 0%

1 -



9



W 300 : L 40

□ Question 120 of 144

□ □

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He is tachycardic at 110 bpm but other observations are normal. Urine dipstick has 2+ blood, nil else. His blood tests reveal a Sodium 141 mmol/l, Potassium 4.6 mmol/l, Urea 3.6 mmol/l, Creatinine 84µmol/l, CRP 34mg/l. His FBC is normal.

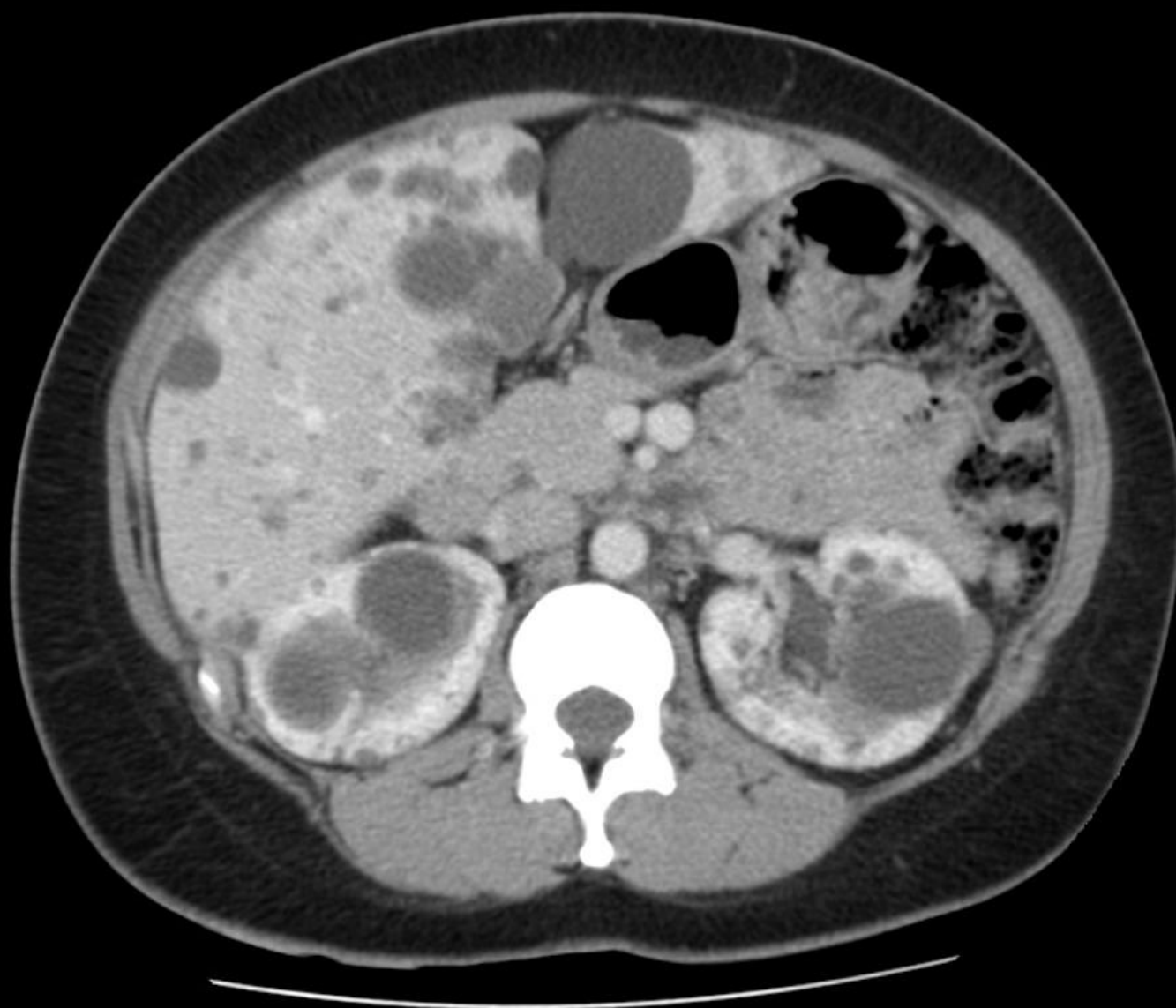
What is the most likely diagnosis?

	Renal stone
	Pyelonephritis
	Renal cell carcinoma
	Polycystic kidney disease
	Wilms' tumour

Dashboard

Overall score: 0%

1 -



Question 121 of 144

You are called to see a 34-year-old gentleman following an episode of haematemesis on the dialysis ward. His haemoglobin has dropped from 101g/L to 69g/L. His blood pressure is 98/54 mmHg, with a heart rate of 100bpm. You note that he is currently awaiting a renal transplant for end-stage diabetic nephropathy. He has no other past medical history. You organise an urgent OGD. How would you manage his anaemia?

<input type="checkbox"/>	Hold transfusion and expedite the OGD
<input type="checkbox"/>	Transfuse and inform the transplant team
<input type="checkbox"/>	Increase the dose of erythropoietin
<input type="checkbox"/>	Contact the renal team for advice regarding transfusion
<input type="checkbox"/>	Transfuse and administer terlipressin

Dashboard

Overall score: **0%**

1 -

Question 121 of 144

□ □

You are called to see a 34-year-old gentleman following an episode of haematemesis on the dialysis ward. His haemoglobin has dropped from 101g/L to 69g/L. His blood pressure is 98/54 mmHg, with a heart rate of 100bpm. You note that he is currently awaiting a renal transplant for end-stage diabetic nephropathy. He has no other past medical history. You organise an urgent OGD. How would you manage his anaemia?

	Hold transfusion and expedite the OGD
	Transfuse and inform the transplant team
	Increase the dose of erythropoietin
	Contact the renal team for advice regarding transfusion
	Transfuse and administer terlipressin

Dashboard

Overall score: **0%**

1 -

Question 122 of 144

A 24-year-old student attends hospital with visible haematuria. He has been unwell for 2 days with a sore throat and fevers. He has been prescribed amoxicillin by his GP and these symptoms are improving. He is concerned by the sudden appearance of haematuria. He has no dysuria or frequency. He is normally well and takes no regular medications. He has not noticed visible haematuria before now. He smokes 10 cigarettes/day.

On your assessment, his observations are as follows:

- Temperature 36.2
- Respiratory rate 18/min
- Saturations 97% on air
- Heart rate 76 bpm
- Blood pressure 130/80 mmHg

Throat examination reveals pharyngeal erythema.

Bloods are as follows:

Hb	132 g/l
Platelets	235 * 10 ⁹ /l
WBC	14.0 * 10 ⁹ /l
Na ⁺	138 mmol/l
K ⁺	4.0 mmol/l
Urea	3.2 mmol/l
Creatinine	62 µmol/l
CRP	85 mg/l

Urine dipstick shows 4+ blood.

What is the best management?

	Admit under renal team for renal biopsy
	Admit under urology for urgent investigation of haematuria
	Discharge and refer to urology for investigation of haematuria
	Discharge with routine renal outpatient referral
	Discharge with no follow up

Dashboard

Overall score: 0%

1 -

Question 122 of 144

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What is the best management?

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	Discharge and refer to urology for investigation of haematuria
	Discharge with routine renal outpatient referral
	Discharge with no follow up

Dashboard

Overall score: **0%**

1 -

□ Question 123 of 144

□ □

A 47-year-old male is referred by his GP in the urgent care centre to the medical team for review. The patient describes 5 months of non-specific symptoms, describing fatigue and malaise with no focal symptoms. He reports that his 'urine looks a bit weird' and a sample reveals frothy urine. A urine dip reveals 4+ protein 4+ blood no leucocytes or nitrites. His resting blood pressure is 190/120 mmHg. On examination, you note bilateral periorbital oedema, a right varicocele and prominent abdominal veins. You also note significant swelling around both eyes. His past medical history includes intravenous drug use, one previous admission for cellulitis around a groin injection site, positive hepatitis B and atopic dermatitis. He denies drug use over the past 2 months and denies any recent infections.

His first serum results are as follows:

Hb	105 g/l
Platelets	$426 \times 10^9/l$
WBC	$11.2 \times 10^9/l$

Na ⁺	138 mmol/l
K ⁺	4.3 mmol/l
Urea	16 mmol/l
Creatinine	230 μ mol/l
Albumin	19 g/l
CRP	16 mg/l

An urgent ultrasound of his renal tract reveals a right renal vein thrombus.

What is the most likely underlying diagnosis?

	Minimal change disease
	Membranous glomerulonephritis

	Primary focal segmental glomerulosclerosis
	Right renal vein thrombosis
	Goodpasture's syndrome

Dashboard

Overall score: 0%

1 -

□ Question 123 of 144

□ □

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Dashboard

Overall score: **0%**
1 -

Question 123 of 144

A 47-year-old male is referred by his GP in the 5 months of non-specific symptoms, describing looks a bit weird' and a sample reveals frothy urine. His resting blood pressure is 190/120 mmHg. On examination you note prominent abdominal veins. You also note signs of intravenous drug use, one previous admission for cellulitis dermatitis. He denies drug use over the past 2 months.

His first serum results are as follows:

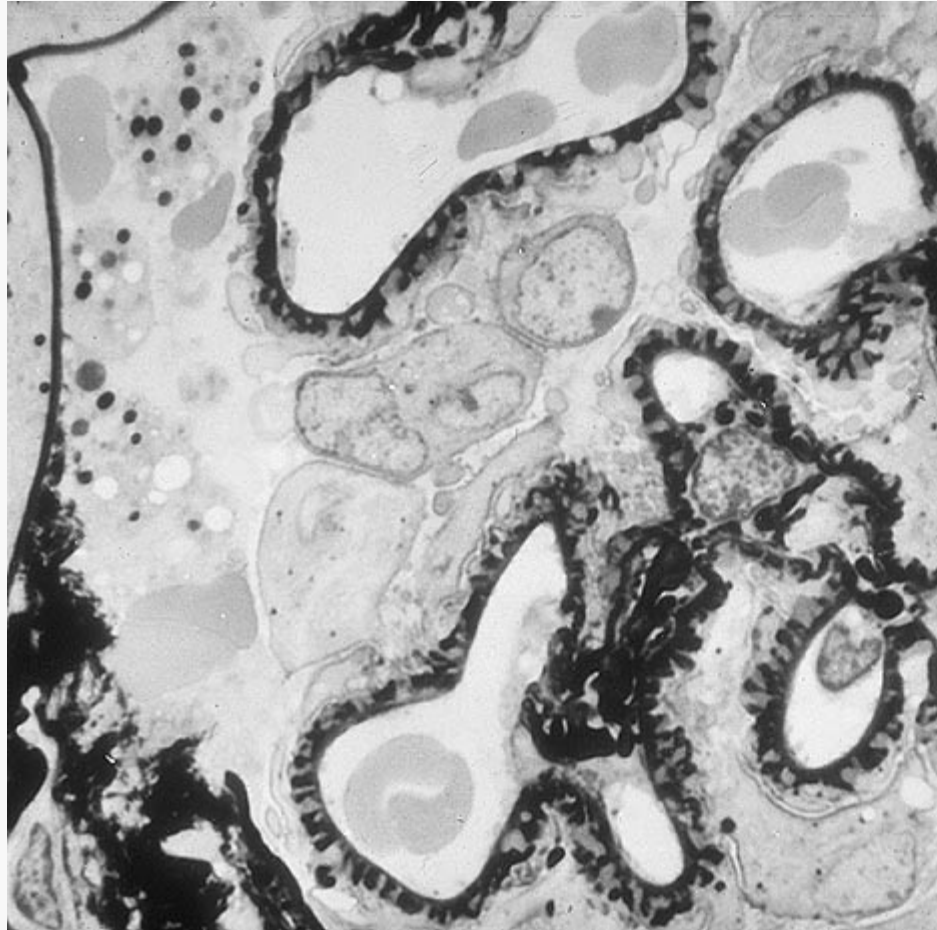
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What is the most likely underlying diagnosis?

<input type="radio"/>	Minimal change disease
<input checked="" type="radio"/>	Membranous glomerulonephritis



	Primary focal segmental glomerulosclerosis
	Right renal vein thrombosis
	Goodpasture's syndrome

Dashboard

Overall score: **0%**
1 -

Question 124 of 144

□ □

You are the medical doctor on an acute medical admissions unit. A 60 year old gentleman has been referred by his GP with hypokalaemia (potassium 2.6 mmol/l). He feels well in himself and denies any vomiting or diarrhoea. On examination his observations are as follows: afebrile, pulse 68/min, blood pressure 128/68 mmHg, respiratory rate 16/min, saturations 100% on room air. The rest of his examination is unremarkable.

His results are as follows:

Na ⁺	142 mmol/l
K ⁺	2.6 mmol/l
Bicarbonate	32 mmol/l
Urea	5.3 mmol/l
Creatinine	63 µmol/l
Anion gap	14 mEq/L

Urinary calcium - reduced

What is the most likely diagnosis?

	Bartter's syndrome
	Gitelman's syndrome
	Liddle's syndrome
	Cushing's syndrome
	Conn's syndrome

Overall score: **0%**

1 -

□ Question 124 of 144



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Urea	5.3 mmol/l
Creatinine	63 µmol/l
Anion gap	14 mEq/L

Urinary calcium - reduced

What is the most likely diagnosis?

	Bartter's syndrome
	Gitelman's syndrome
	Liddle's syndrome
	Cushing's syndrome
	Conn's syndrome

Dashboard

Overall score: **0%**

1 -

Question 125 of 144

□ □

A 24-year-old man comes to the Emergency department complaining of macroscopic haematuria. He has also been suffering from a sore throat and cough for the past 48hrs. He tells you that he had a previous episode of haematuria after a respiratory tract infection some 4 years earlier. On this occasion he has been prescribed co-amoxiclav by his GP and feels that his symptoms are improving. On examination his blood pressure is 122/80 mmHg, pulse is 67 and regular. he is afebrile. Auscultation of the chest reveals minor crackles at the left base, and he has obvious pharyngitis.

Relevant investigations:

Creatinine	85 mmol/l
Urine	blood + + +

Which of the following is the most appropriate intervention?

	Valsartan
	Observation only
	Prednisolone
	Stop co-amoxiclav
	Ramipril

Dashboard

Overall score: 0%

1 -

Question 125 of 144

□ □

A 24-year-old man comes to the Emergency department complaining of macroscopic haematuria. He has also been suffering from a sore throat and cough for the past 48hrs. He tells you that he had a previous episode of haematuria after a respiratory tract infection some 4 years earlier. On this occasion he has been prescribed co-amoxiclav by his GP and feels that his symptoms are improving. On examination his blood pressure is 122/80 mmHg, pulse is 67 and regular. he is afebrile. Auscultation of the chest reveals minor crackles at the left base, and he has obvious pharyngitis.

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Dashboard

Overall score: **0%**

1 -

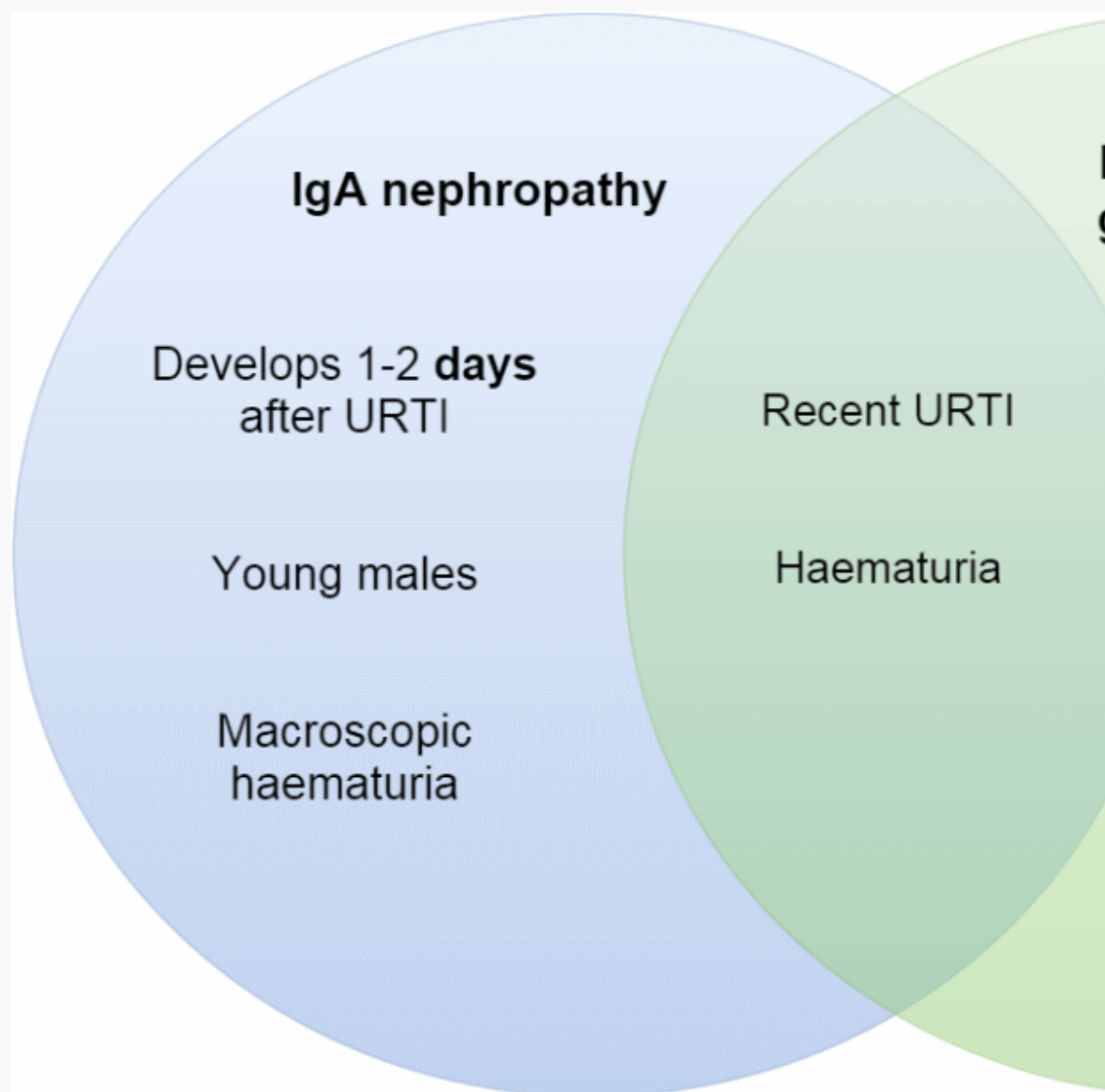
Question 125 of 144

A 24-year-old man comes to the clinic with a sore throat, fever, and malaise after a respiratory tract infection. He feels that his symptoms are improving but he is afebrile. Auscultation of his lungs is normal.

Relevant investigations:

Creatinine	85 mmol/l
Urine	blood + + +

Which of the following is the most appropriate management?



Valsartan

Observation only

Prednisolone

Stop co-amoxiclav

Ramipril

Dashboard

Overall score: 0%

1 -

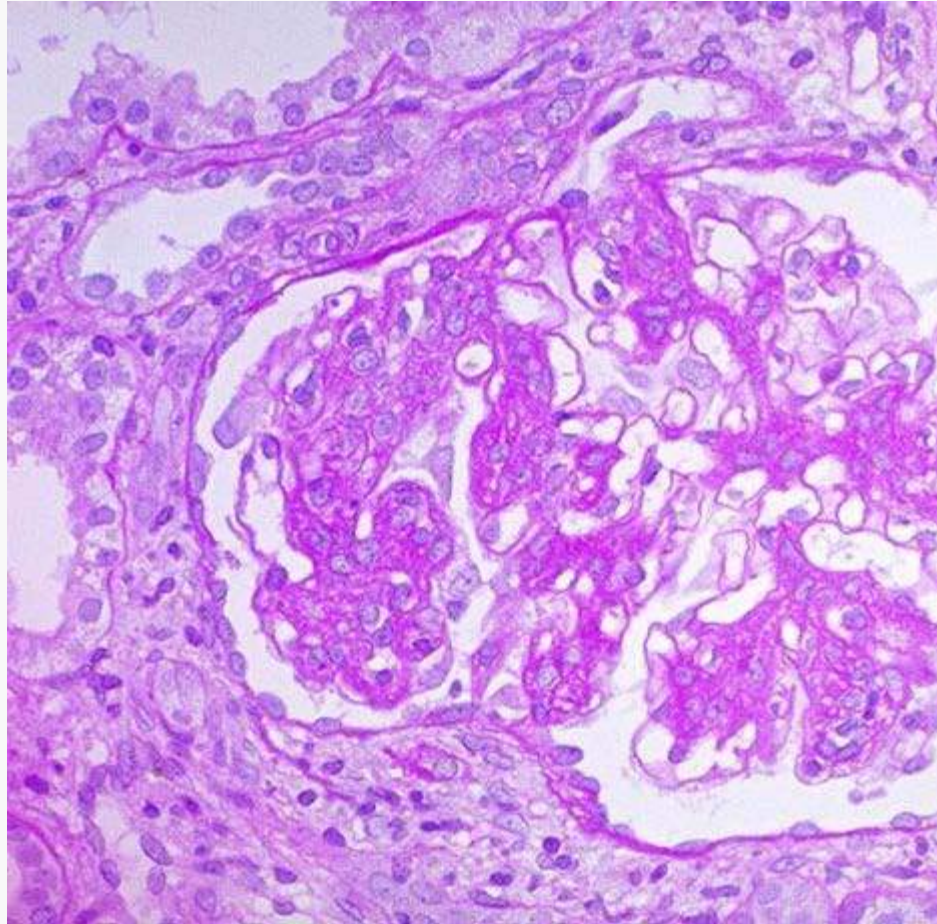
Question 125 of 144

A 24-year-old man comes to the Emergency department suffering from a sore throat and cough for the past 2 weeks after a respiratory tract infection some 4 years ago and feels that his symptoms are improving. On examination he is afebrile. Auscultation of the chest reveals

Relevant investigations:

Creatinine	85 mmol/l
Urine	blood + + +

Which of the following is the most appropriate management?



<input type="radio"/>	Valsartan
<input checked="" type="radio"/>	Observation only
<input type="radio"/>	Prednisolone
<input type="radio"/>	Stop co-amoxiclav
<input type="radio"/>	Ramipril

Dashboard

Overall score: **0%**

1 -

Question 125 of 144

□ □

A 24-year-old man comes to the Emergency department complaining of macroscopic haematuria. He has also been suffering from a sore throat and cough for the past 48hrs. He tells you that he had a previous episode of haematuria after a respiratory tract infection some 4 years earlier. On this occasion he has been prescribed co-amoxiclav by his GP and feels that his symptoms are improving. On examination his blood pressure is 122/80 mmHg, pulse is 67 and regular. he is afebrile. Auscultation of the chest reveals minor crackles at the left base, and he has obvious pharyngitis.

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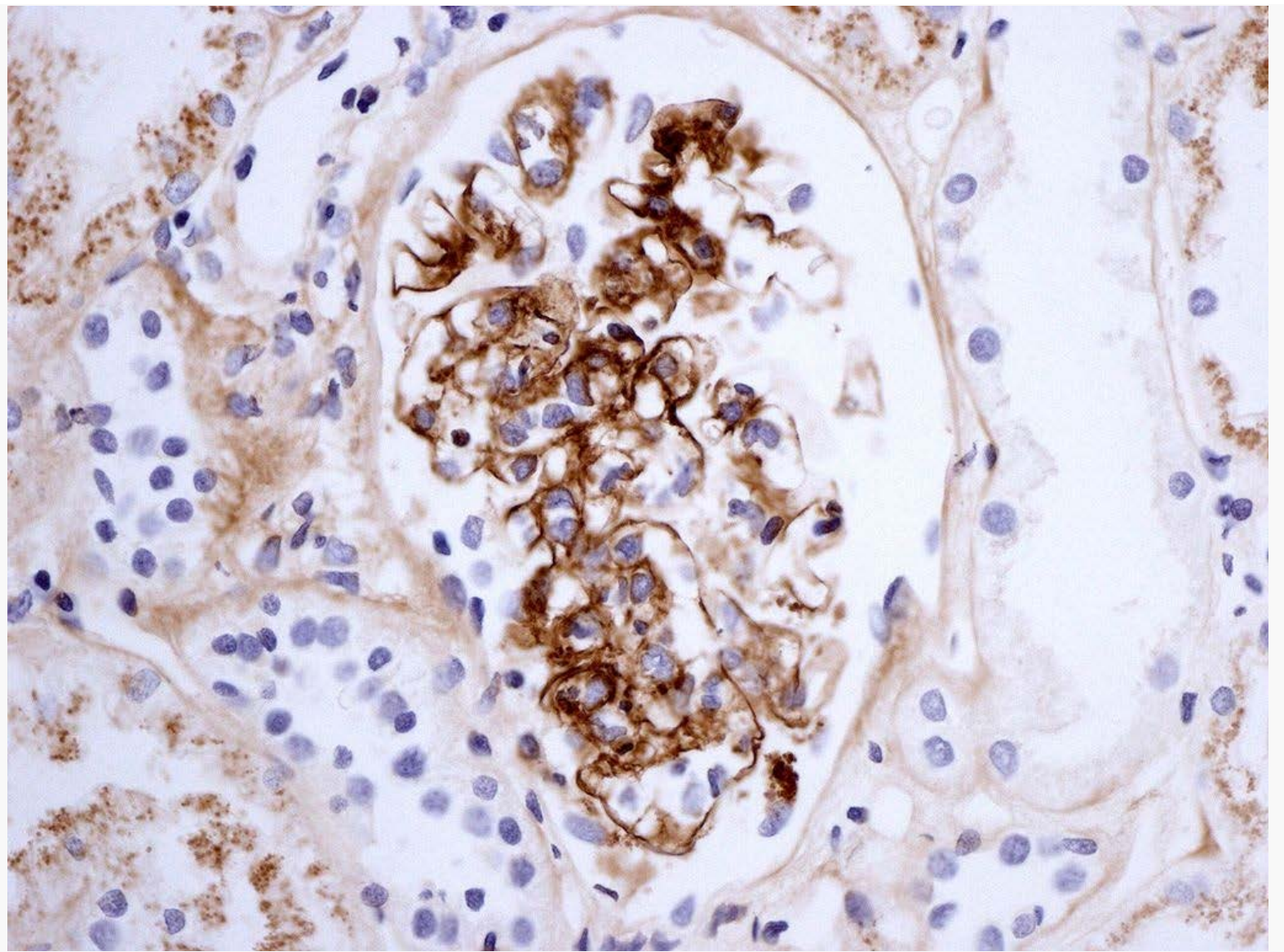
Which of the following is the most appropriate intervention?

	Valsartan
	Observation only
	Prednisolone
	Stop co-amoxiclav
	Ramipril

Dashboard

Overall score: 0%

1 -



Question 126 of 144

□ □

A 59-year-old gentleman is admitted to hospital with lower abdominal pain. He has a past medical history includes Parkinson's disease, psoriasis and high cholesterol. Current medications include methotrexate 10mg once weekly, bromocriptine 2.5mg BD, atorvastatin 20mg ON, levodopa 200mg TDS and entacapone 200mg OD.

Observations on admission are as follows: heart rate 102 beats per minute, blood pressure 125/62 mmHg, respiratory rate 18/min, oxygen saturations 97% (room air), temperature 37.2°C. On examination, there is bilateral loin tenderness, with no evidence of peritonism. Bowel sounds are active. Urine dipstick confirms blood 2+ with no evidence of nitrites or leucocytes. An abdominal x-ray is unremarkable.

Which medication is likely to be implicated with the underlying diagnosis?

	Bromocriptine
	Entacapone
	Methotrexate
	Atorvastatin
	Levodopa

Dashboard

Overall score: 0%

1 -

Question 126 of 144

□ □

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Which medication is likely to be implicated with the underlying diagnosis?

	Bromocriptine
	Entacapone
	Methotrexate
	Atorvastatin
	Levodopa

Dashboard

Overall score: **0%**

1 -

Question 127 of 144

□ □

You are the medical doctor on an acute medical admissions unit. A 42-year old gentleman with type 1 diabetes and Alport's syndrome presents with an acute kidney injury following a renal transplant 2 weeks ago from his brother (still alive). He is on immunosuppressive therapy (tacrolimus and mycophenolate mofetil) and otherwise feels well. Examination is normal but his urine dipstick has 3+ blood and protein.

His blood tests are as follows:

Na ⁺	141 mmol/l
K ⁺	4.7 mmol/l
Urea	18.6 mmol/l
Creatinine	288 µmol/l (baseline 80 µmol/l)
eGFR	34 ml/min (baseline 82 ml/min)

What is the most likely cause of his presentation?

	Acute graft rejection
	Accelerated graft rejection
	Renal vein thrombosis
	CMV infection
	Goodpasture's syndrome

Dashboard

Overall score: 0%

□ Question 127 of 144

□ □

You are the medical doctor on an acute medical admissions unit. A 42-year old gentleman with type 1 diabetes and Alport's syndrome presents with an acute kidney injury following a renal transplant 2 weeks ago from his brother (still alive). He is on immunosuppressive therapy (tacrolimus and mycophenolate mofetil) and otherwise feels well. Examination is normal but his urine dipstick has 3+ blood and protein.

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Urea	18.6 mmol/l
Creatinine	288 µmol/l (baseline 80 µmol/l)
eGFR	34 ml/min (baseline 82 ml/min)

What is the most likely cause of his presentation?

	Acute graft rejection
	Accelerated graft rejection
	Renal vein thrombosis
	CMV infection
	Goodpasture's syndrome

Dashboard

Overall score: **0%**

Question 128 of 144

□ □

A 67-year-old man with chronic kidney disease secondary to diabetes mellitus is seen in the clinic. He reports no new symptoms and has good glycaemic control.

His current medications are metformin 1g BD, aspirin 75mg OD, bisoprolol 1.25mg OD. On examination, there is mild peripheral oedema and his blood pressure is 135/80mmHg; this has been confirmed by ambulatory blood pressure monitoring.

What is the most appropriate next step?

	Monitor blood pressure
	Add atorvastatin 40mg ON PO
	Add in ramipril 1.25mg OD PO
	Add furosemide
	Increase bisoprolol to 2.5mg OD

Dashboard

Overall score: 0%

1 -

Question 128 of 144

□ □

A 67-year-old man with chronic kidney disease secondary to diabetes mellitus is seen in the clinic. He reports no new symptoms and has good glycaemic control.

His current medications are metformin 1g BD, aspirin 75mg OD, bisoprolol 1.25mg OD. On examination, there is mild peripheral oedema and his blood pressure is 135/80mmHg; this has been confirmed by ambulatory blood pressure monitoring.

What is the most appropriate next step?

	Monitor blood pressure
	Add atorvastatin 40mg ON PO
	Add in ramipril 1.25mg OD PO
	Add furosemide
	Increase bisoprolol to 2.5mg OD

Dashboard

Overall score: **0%**

1 -

Question 129 of 144

□ □

A 30 year-old man from Crete presents with recurrent episodes of abdominal pain and fever. He has a family history of his father suffering from similar episodes. His only regular medication includes taking high doses of paracetamol and ibuprofen for around ten years to help with his symptoms.

He had a blood test nine months ago and the two sets of results are compared below:

Results 9 months ago:

Na ⁺	145 mmol/l
K ⁺	3.7 mmol/l
Urea	7.9 mmol/l
Creatinine	96 µmol/l

Results today:

Na ⁺	137 mmol/l
K ⁺	4.8 mmol/l
Urea	13.9 mmol/l
Creatinine	196 µmol/l

Which of the following is this most diagnostic test?

	Intravenous urogram
	Renal biopsy
	Genetic analysis

	Serum amyloid P component
	Blood culture

Dashboard

Overall score: **0%**

1 -

Question 129 of 144

□ □

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	Intravenous urogram
	Renal biopsy
	Genetic analysis

	Serum amyloid P component
	Blood culture

Dashboard

Overall score: **0%**
1 -

□ Question 130 of 144

□ □

A 36 year male presents with sudden onset, sharp, right sided chest pain and a 4 month history of increasing leg swelling, weight gain and abdominal distension. He has no past medical history of note. On examination he is tachycardic at 105/min with otherwise normal observations. Cardiovascular and respiratory examinations are normal; there is shifting dullness on examination of the abdomen with no masses palpable. There is also bilateral pitting oedema to the groins. Electrocardiogram shows sinus tachycardia. Urine dip shows 3+ protein nil else. Chest X-ray is unremarkable. Blood tests show the following:

Hb	137 g/l	Na ⁺	141 mmol/l	Bilirubin	12 µmol/l
Platelets	275 * 10 ⁹ /l	K ⁺	4.4 mmol/l	ALP	89 u/l
WBC	9.2 * 10 ⁹ /l	Urea	4.3 mmol/l	ALT	33 u/l
Neuts	7.3 * 10 ⁹ /l	Creatinine	86 µmol/l	γGT	47 u/l
Lymphs	1.4 * 10 ⁹ /l	Albumin	20 g/l		

What is the most likely cause of his chest pain?

	Pulmonary embolism
	Acute coronary syndrome
	Aortic dissection
	Pneumothorax
	Musculoskeletal chest pain

Dashboard

Overall score: 0%

□ Question 130 of 144

□ □

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	Pulmonary embolism
	Acute coronary syndrome
	Aortic dissection
	Pneumothorax
	Musculoskeletal chest pain

Dashboard

Overall score: 0%

□ Question 131 of 144



A 40-year-old man with end-stage chronic kidney disease is seen in the Emergency Department with a swollen right arm. He has dialysis 3 times per week through a fistula in the right arm but dialysis has been painful on the last two sessions and he has had to stop 30 minutes early on both occasions. He does not complain of swelling elsewhere. He has no shortness of breath and no fevers. His past medical history is of reflux nephropathy and hypertension. He has no history of thromboembolism. He has been on dialysis through this fistula for 2 years and the swelling has been developing over the last 2 weeks.

On examination his heart rate is 83 beats per minute, blood pressure 157/94 mmHg, temperature 36.8 °C and oxygen saturations 98% on air. He has a diffusely swollen right arm with no erythema. His fistula site is clean with recent evidence of needle marks and no discharge. There is a palpable thrill and an audible bruit. His chest is clear and JVP is 2cm. There is no oedema of the contralateral arm and mild oedema of both feet.

Chest x-ray shows mild chronic cardiomegaly with clear lung fields.

Blood results are as follows:

Hb	105 g/l	Na ⁺	135 mmol/l
Platelets	170 * 10 ⁹ /l	K ⁺	5.1 mmol/l
WBC	9 * 10 ⁹ /l	Urea	21 mmol/l
Neuts	5.5 * 10 ⁹ /l	Creatinine	753 µmol/l
Lymphs	2.2 * 10 ⁹ /l	CRP	18 mg/l

What is the most likely likely diagnosis?

	Cellulitis
	Deep vein thrombosis
	Fistula stenosis

	Post-surgical lymphoedema
	Superior vena cava obstruction

Dashboard

Overall score: **0%**

1 -

□ Question 131 of 144



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Dashboard

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1 -

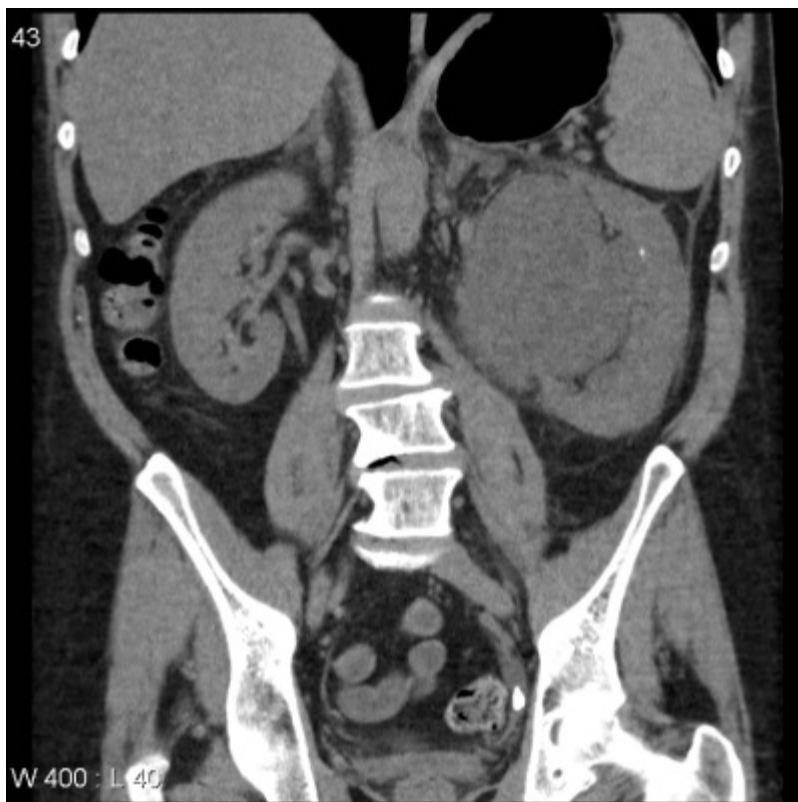
□ Question 132 of 144

□ □

A 54-year-old man presents to the Emergency Department with left flank pain. For the past 3 days he has been having intermittent pain in that area but now the pain is continuous.

Dipstick urine shows blood+++, protein+.

A CT of the abdomen is arranged:



© Image used on license from Radiopaedia



What is the most likely diagnosis?

--	--

	Splenic abscess
	Autosomal dominant polycystic kidney
	Splenic rupture
	Hydronephrosis
	Acute pyelonephritis

Dashboard

Overall score: **0%**

1 -

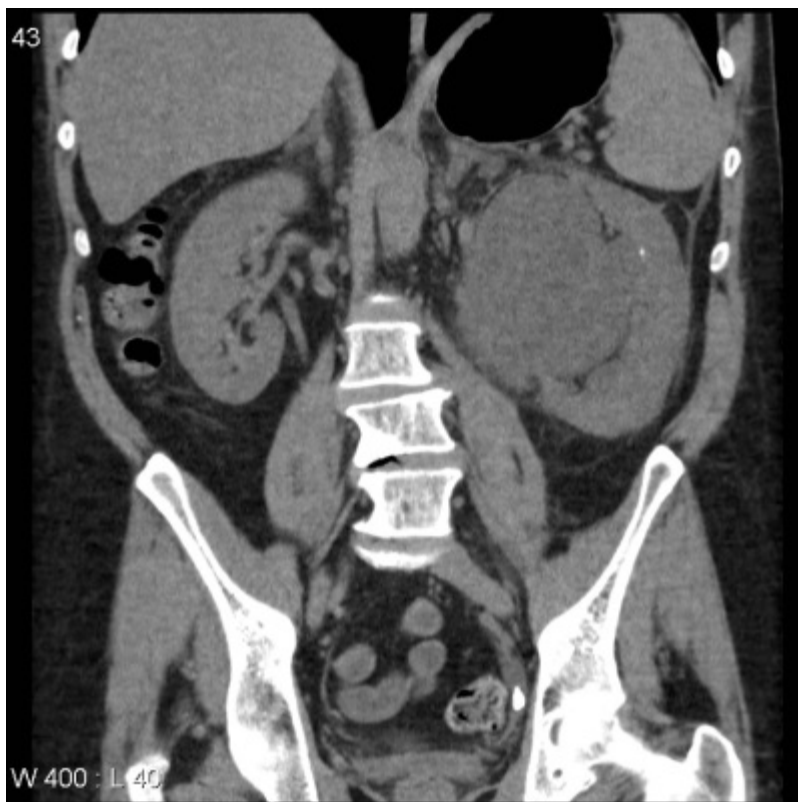
Question 132 of 144

□ □

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Dashboard

Overall score: **0%**
1 -

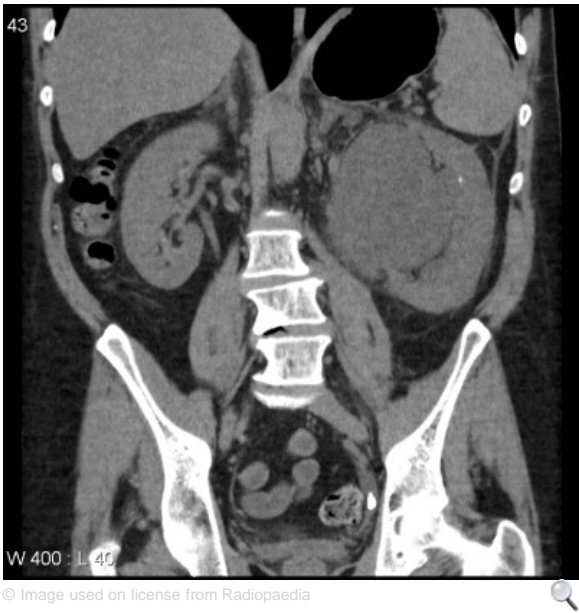
Question 132 of 144



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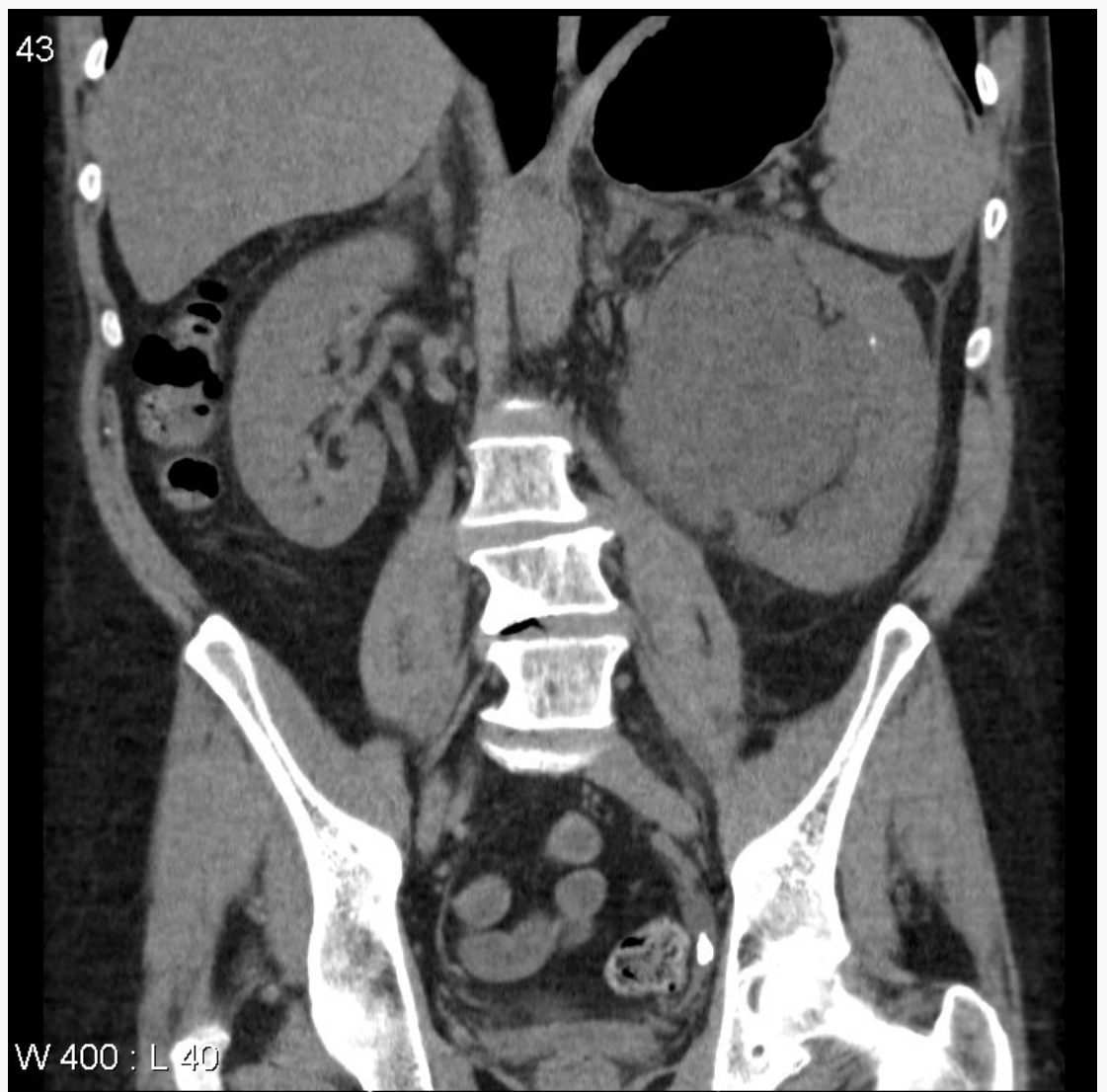
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Dashboard

Overall score: 0%

1 -



□ Question 133 of 144



A 40-year-old woman is brought to the GP by her husband due to her recent onset of lethargy and confusion. For the past few days she has been complaining of intense thirst, craving for ice water and increased urination, particularly at night. Her medications include lithium and olanzapine for bipolar disorder and lansoprazole for acid reflux.

Her temperature is 37.2°C, blood pressure is 83/59 mmHg, pulse is 122/min and respiratory rate is 15/min. Physical examination shows a disoriented woman with reduced skin turgor and dry mucous membranes.

Laboratory results are as follows:

Na ⁺	156 mmol/l
K ⁺	4.1 mmol/l
Urea	9.6 mmol/l
Creatinine	141 µmol/l
Chloride	110 mmol/l
Bicarbonate	24 mmol/l
Serum glucose	9.9 mmol/l
Serum osmolality	328 mOsm/kg
Urine osmolality	180 mOsm/kg
Serum lithium	pending

Which of the following is the most appropriate next step in management of this patient?

	Haemodialysis
	I.V. 0.45% normal saline
	I.V. 0.9% normal saline

	I.V. 5% dextrose
	Water deprivation test

Dashboard

Overall score: **0%**
1 -

□ Question 133 of 144



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	I.V. 0.9% normal saline

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	Water deprivation test

Dashboard

Overall score: **0%**
1 -

□ Question 134 of 144



A 22-year-old female presents to the Emergency Department with blood in her urine. She produces a sample, demonstrates painless rose coloured macroscopic haematuria. She reports no past medical history except a single episode of a urinary tract infection about 5 years ago and a recent 'cough and sore throat' that had got better two weeks ago. Her family has no history of bladder or kidney problems except her mother having 'shockwave treatment to her kidney tubes a few years ago'. She is sexually active with a regular partner, her last menstrual period was 3 weeks ago. On examination, her abdomen is soft and non-tender with no organomegaly. Urine dip demonstrates 4+ blood, 1+ protein. Her blood tests are as follows:

Hb	125 g/l
Platelets	259 * 10 ⁹ /l
WBC	12.1 * 10 ⁹ /l

Na ⁺	139 mmol/l
K ⁺	4.8 mmol/l
Urea	5.6 mmol/l
Creatinine	72 µmol/l
CRP	3 mg/l

Beta HCG	negative
HIV	negative
CMV IgG	positive
CMV IgM	negative
EBV IgG	positive
Anti-streptolysin titre	positive

Chest radiography is unremarkable. Ultrasound of her renal tract shows normal sized kidneys with no hydronephrosis.

What is the diagnosis?

	IgA nephropathy
	Diffuse proliferative glomerulonephritis
	Minimal change disease
	Membranoproliferative glomerulonephritis
	Ureteric calculi

Dashboard

Overall score: 0%

1 -

□ Question 134 of 144



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Dashboard

Overall score: **0%**

1 -

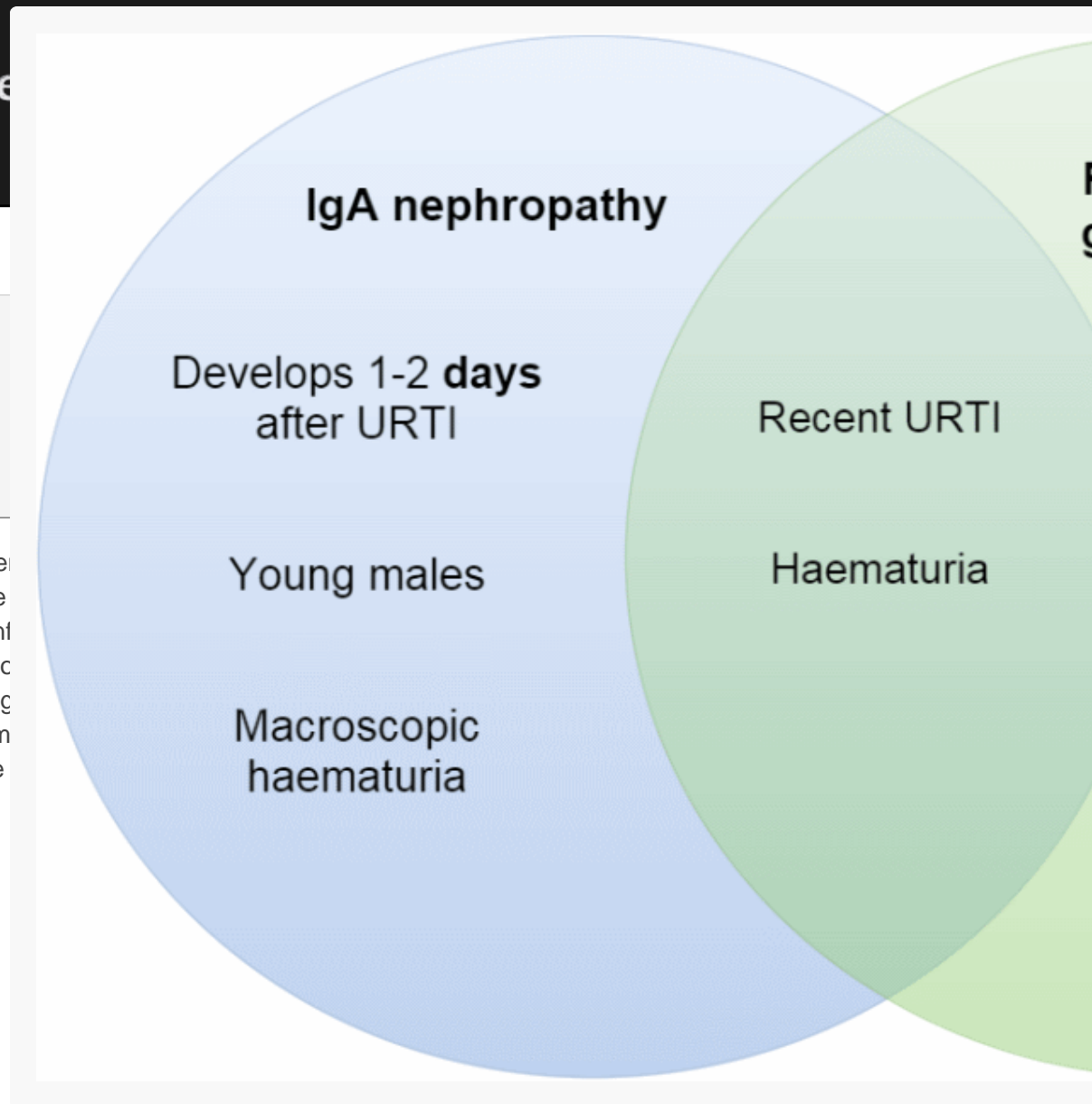
Question 134 of 144

A 22-year-old female presents with a painless urinary tract infection episode of a urinary tract infection 1-2 days ago. Her family has no history of kidney stones a few years ago. On examination, her abdomen is soft and non-tender. Her blood tests are as follows:

Hb	125 g/l
Platelets	$259 \times 10^9/l$
WBC	$12.1 \times 10^9/l$

Na ⁺	139 mmol/l
K ⁺	4.8 mmol/l
Urea	5.6 mmol/l
Creatinine	72 μ mol/l
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HIV	negative
CMV IgG	positive
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	Diffuse proliferative glomerulonephritis
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	Ureteric calculi

Dashboard

Overall score: **0%**

1 -

Question 134 of 144



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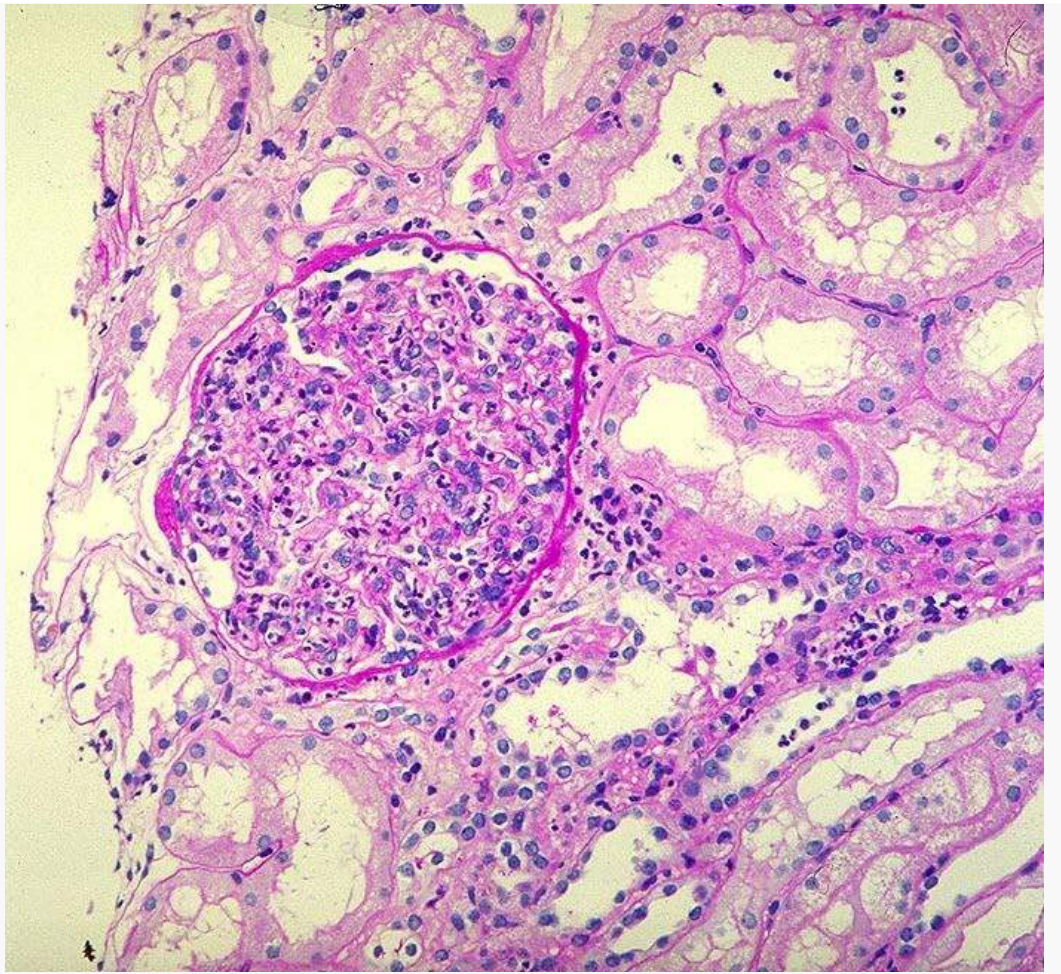
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Dashboard

Overall score: 0%



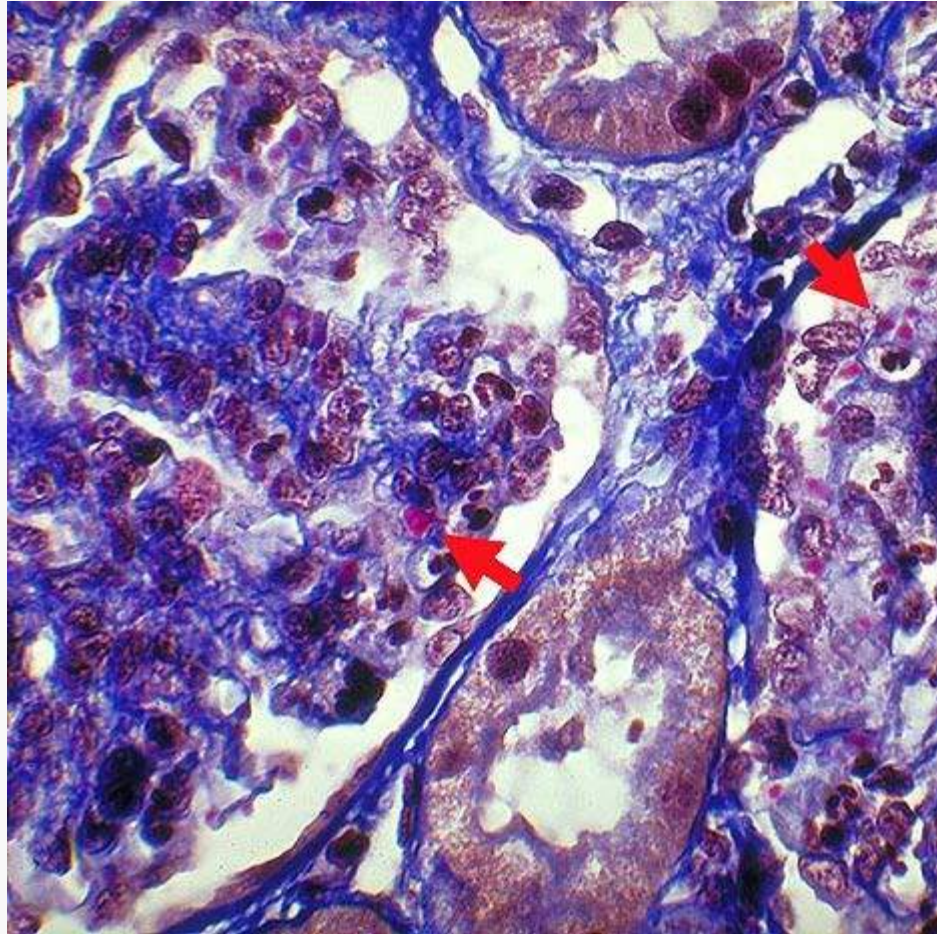
Question 134 of 144

A 22-year-old female presents to the Emergency department with a 2-week history of painless, rose coloured macroscopic haematuria. She reports an episode of a urinary tract infection about 5 years ago. Her family has no history of bladder or kidney disease. She is sexually active and has had a hysterectomy a few years ago. On examination, her abdomen is soft and non-tender. Her blood tests are as follows:

Hb	125 g/l
Platelets	$259 \times 10^9/l$
WBC	$12.1 \times 10^9/l$

Na ⁺	139 mmol/l
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Dashboard

Overall score: 0%

1 -

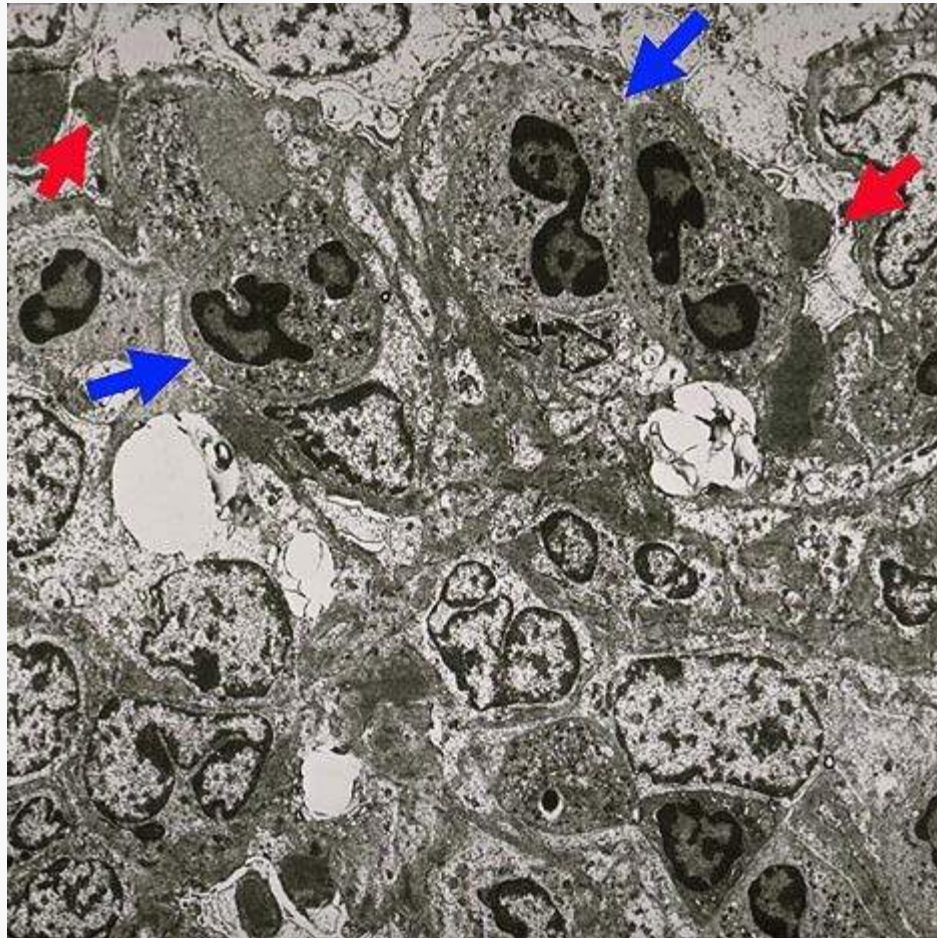
Question 134 of 144

A 22-year-old female presents to the Emergency department with a 2-week history of painless, rose coloured macroscopic haematuria. She reports a single episode of a urinary tract infection about 5 years ago. Her family has no history of bladder or kidney disease. She is sexually active and has had a tubal ligation a few years ago. On examination, her abdomen is soft and non-tender. Urinalysis shows 2+ blood, 1+ protein, and 10-15 WBCs per high power field. Her blood tests are as follows:

Hb	125 g/l
Platelets	$259 \times 10^9/l$
WBC	$12.1 \times 10^9/l$

Na ⁺	139 mmol/l
K ⁺	4.8 mmol/l
Urea	5.6 mmol/l
Creatinine	72 μ mol/l
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Beta HCG	negative
HIV	negative
CMV IgG	positive
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EBV IgG	positive
Anti-streptolysin titre	positive



Chest radiography is unremarkable. Ultrasound of her renal tract shows normal sized kidneys with no hydronephrosis.

What is the diagnosis?

	IgA nephropathy
	Diffuse proliferative glomerulonephritis
	Minimal change disease
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	Ureteric calculi

Dashboard

Overall score: 0%

1 -

Question 135 of 144

□ □

A 60-year-old man is diagnosed with idiopathic pulmonary fibrosis after presenting with an 18 month history of progressive dyspnoea. His latest FVC is 60% of predicted. What is the average life expectancy for such a patient?

	3-6 months
	6-12 months
	12-18 months
	3-4 years
	8-12 years

Dashboard

Overall score: **0%**

1 -

Question 135 of 144

□ □

A 60-year-old man is diagnosed with idiopathic pulmonary fibrosis after presenting with an 18 month history of progressive dyspnoea. His latest FVC is 60% of predicted. What is the average life expectancy for such a patient?

	3-6 months
	6-12 months
	12-18 months
	3-4 years
	8-12 years

Dashboard

Overall score: **0%**

1 -

Question 135 of 144

□ □

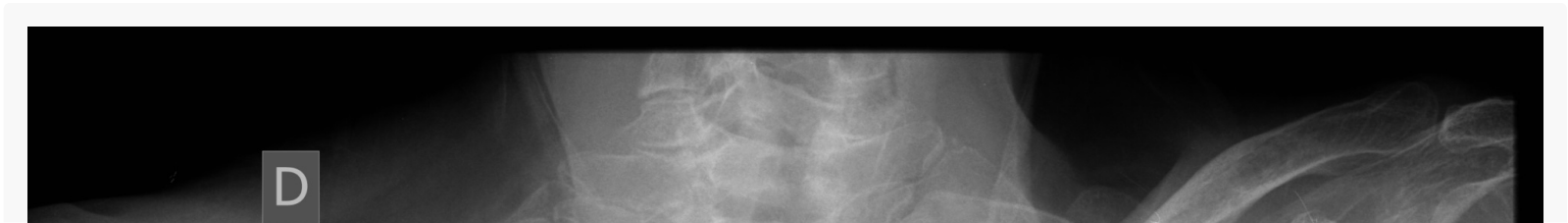
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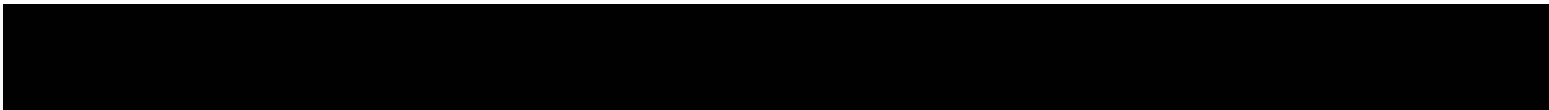
Dashboard

Overall score: **0%**

1 -







Question 135 of 144



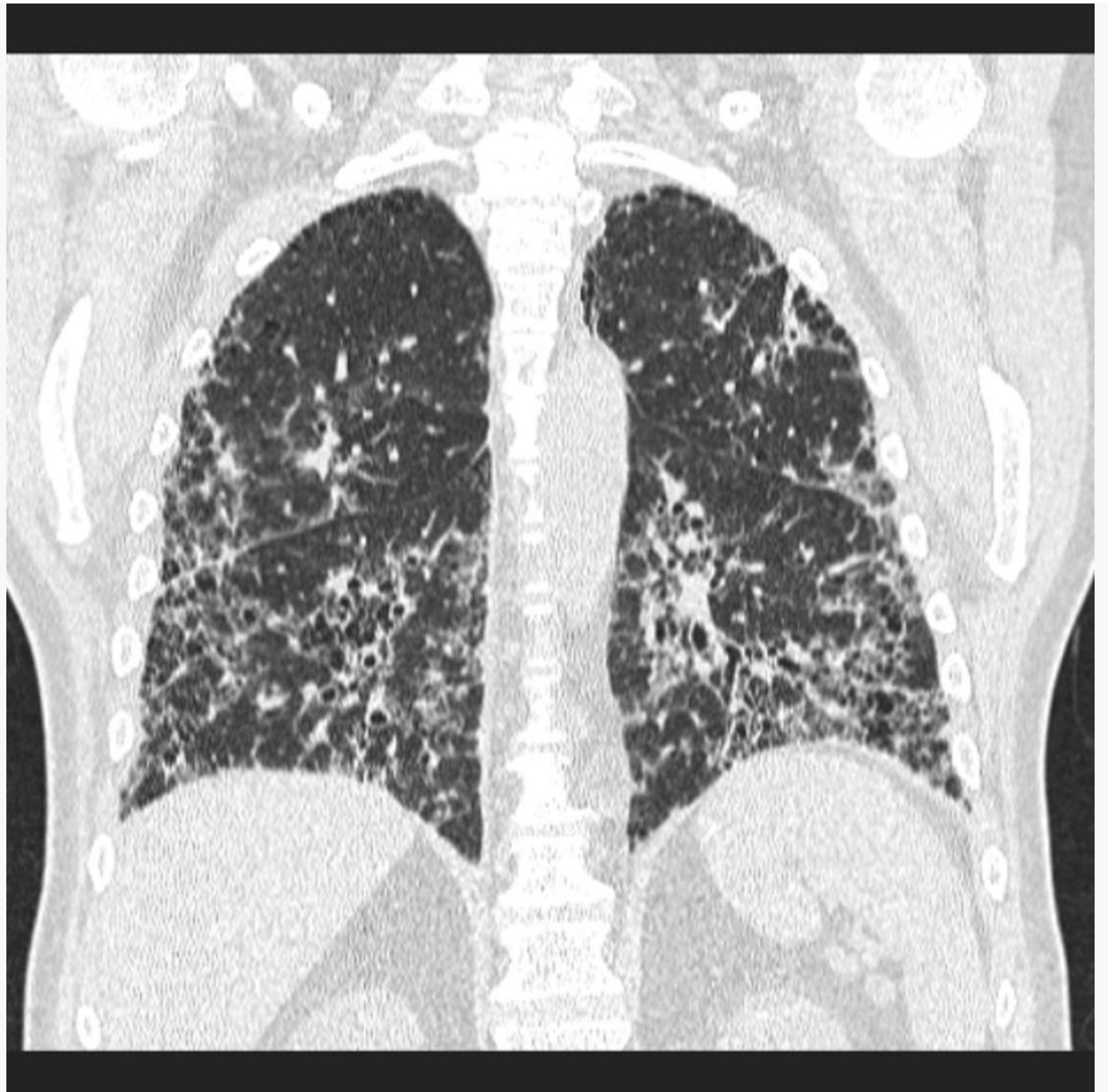
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Dashboard

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1 -



Question 135 of 144

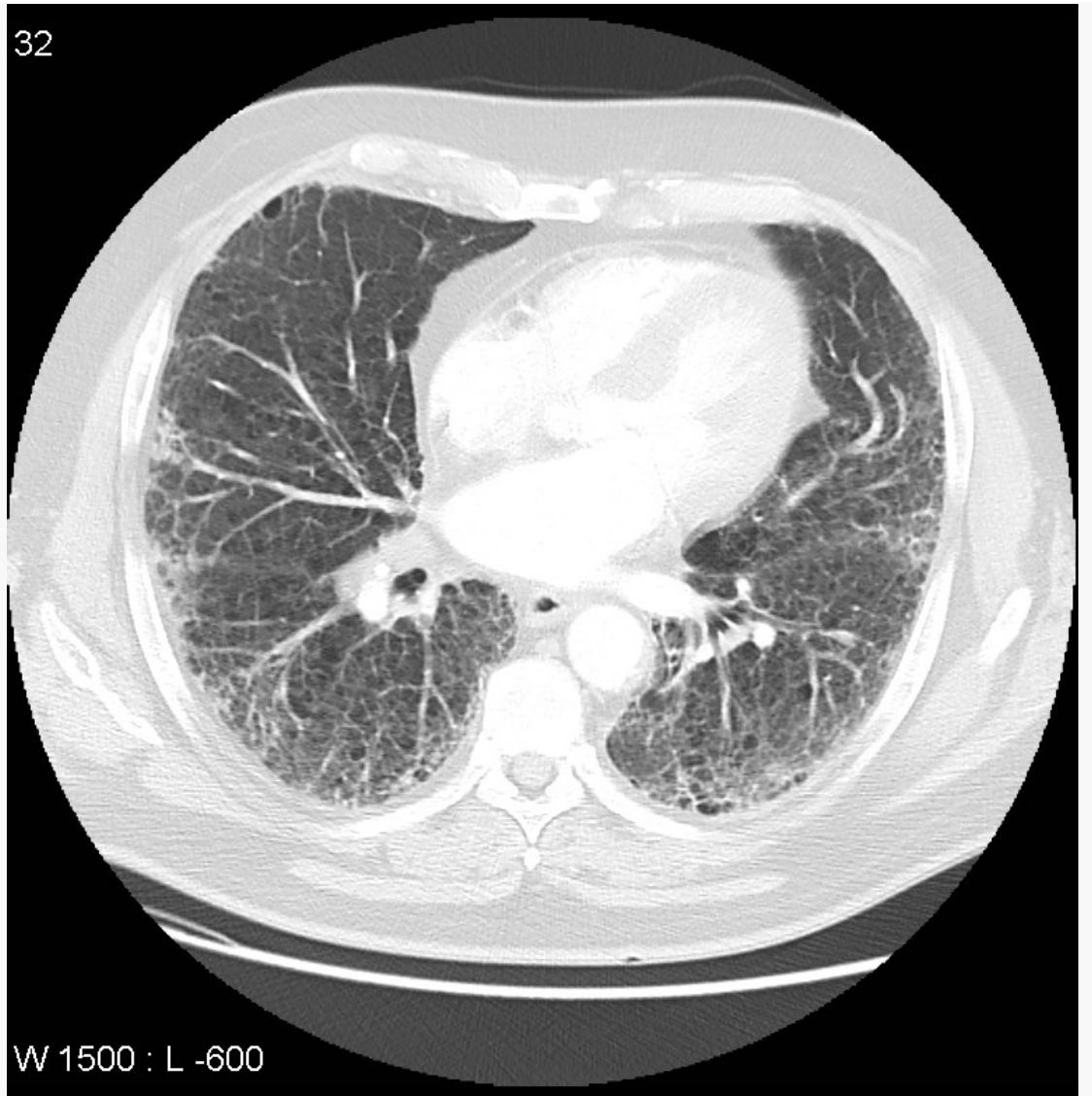


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	12-18 months
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Dashboard

Overall score: 0%
1 -



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□ Question 136 of 144



A 65 year old man with a history of ischemic heart disease, hypertension, and type 2 diabetes mellitus presents with a 10 week history of vague abdominal pain, fatigue, and lately finding it difficult to walk for a long distance because of pain in his legs. He is a heavy smoker for 30 years. His blood pressure is controlled on amlodipine, and his blood sugar is well controlled on glimepiride. He occasionally uses sildenafil for his erectile dysfunction.

On examination his blood pressure 130/80 mmHg, pulse rate 76 beats per minute. His peripheral pulses feels weak on palpation and bilateral lower limb oedema is noted.

The following investigations were ordered:

Na+	140 mmol/l
K+	4 mmol/l
Urea	13 mmol/l
Creatinine	120 mmol/l
ESR	60 mm/hr
Random blood glucose	7 mmol/l
Urine dipstick	Protein +
Hb	12 g/dl
platelets	$200 \times 10^9/l$
WBC	$6 \times 10^9/l$
MCV	80 fl
MCH	0.4 fmol/cell
MCHC	20 mmol/l
ANA	positive

What is the most likely cause for the deterioration in his renal function?

	Chronic interstitial nephritis (CIN)
	Renal artery stenosis (RAS)
	Renal stone
	Takayaso vasculitis
	Retroperitoneal fibrosis

Dashboard

Overall score: 0%

1 -

□ Question 136 of 144



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	Renal stone
	Takayaso vasculitis
	Retroperitoneal fibrosis

Dashboard

Overall score: 0%

1 -

Question 137 of 144

□ □

A 42-year-old man attends for follow-up in renal clinic. The patient has been under surveillance for autosomal dominant polycystic kidney disease for the previous 10 years. The patient is currently asymptomatic but concerned about an ongoing decline in his renal function as monitored by his general practitioner. He has no other past medical history. The patient took ramipril 5 mg daily and had no allergies.

Clinical examination demonstrated bilateral palpable kidneys with a euvolaemic fluid status. Blood pressure in clinic was documented as 105 / 70 mmHg.

Please see below for serial renal function and ultrasound results over the period of follow-up.

Date	Estimated globular filtration rate mL / min / 1.73 m3
10 years previous	72
8 years previous	68
5 years previous	62
2 years previous	59
Present	41

Date	Increase in total kidney volume relative to previous measurement
10 years previous	n/a
8 years previous	+ 2 %
5 years previous	+ 2 %
2 years previous	+ 7 %

Present	+ 12 %
---------	--------

What is the appropriate management to reduce the rate in decline of the patients renal function?

	Desmopresin
	Increase Ramipril dose
	Pravastatin
	Octreotide
	Tolvaptan

Dashboard

Overall score: **0%**

1 -

□ Question 137 of 144

□ □

A 42-year-old man attends for follow-up in renal clinic. The patient has been under surveillance for autosomal dominant polycystic kidney disease for the previous 10 years. The patient is currently asymptomatic but concerned about an ongoing decline in his renal function as monitored by his general practitioner. He has no other past medical history. The patient took ramipril 5 mg daily and had no allergies.

Clinical examination demonstrated bilateral palpable kidneys with a euvolaemic fluid status. Blood pressure in clinic was documented as 105 / 70 mmHg.

Please see below for serial renal function and ultrasound results over the period of follow-up.

Date	Estimated globular filtration rate mL / min / 1.73 m3
10 years previous	72
8 years previous	68
5 years previous	62
2 years previous	59
Present	41

Date	Increase in total kidney volume relative to previous measurement
10 years previous	n/a
8 years previous	+ 2 %
5 years previous	+ 2 %
2 years previous	+ 7 %

Present	+ 12 %
---------	--------

What is the appropriate management to reduce the rate in decline of the patients renal function?

	Desmopresin
	Increase Ramipril dose
	Pravastatin
	Octreotide
	Tolvaptan

Dashboard
Overall score: 0% 1 -

□ Question 137 of 144

□ □

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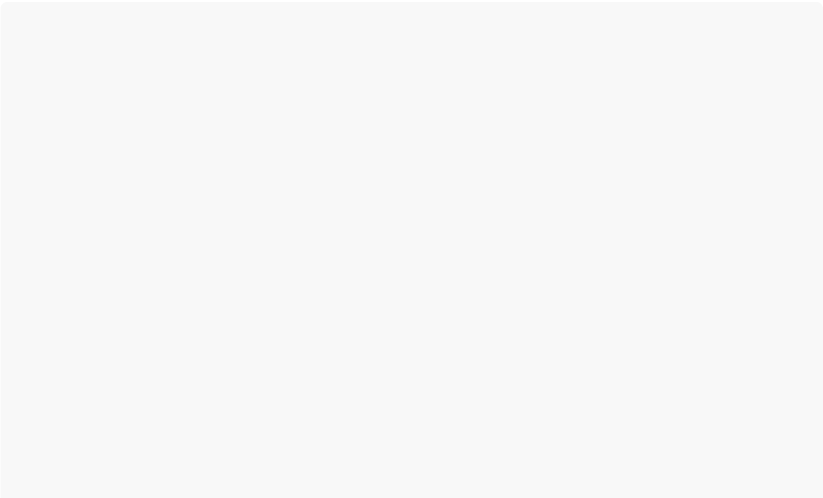
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Dashboard

Overall score: **0%**
1 -





□ Question 137 of 144

□ □

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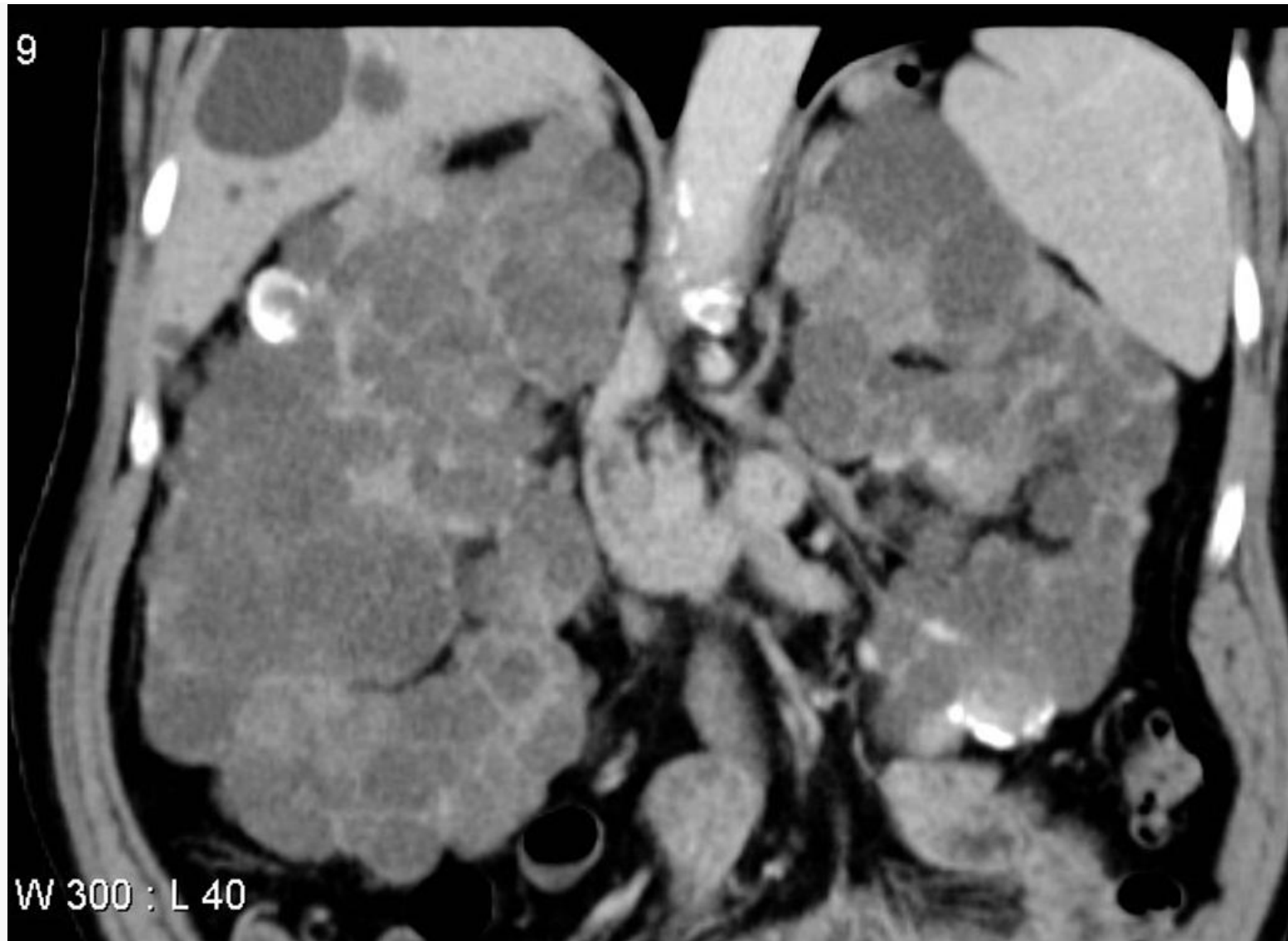
Dashboard

Overall score: **0%**

1 -

9

W 300 : L 40



□ Question 137 of 144

□ □

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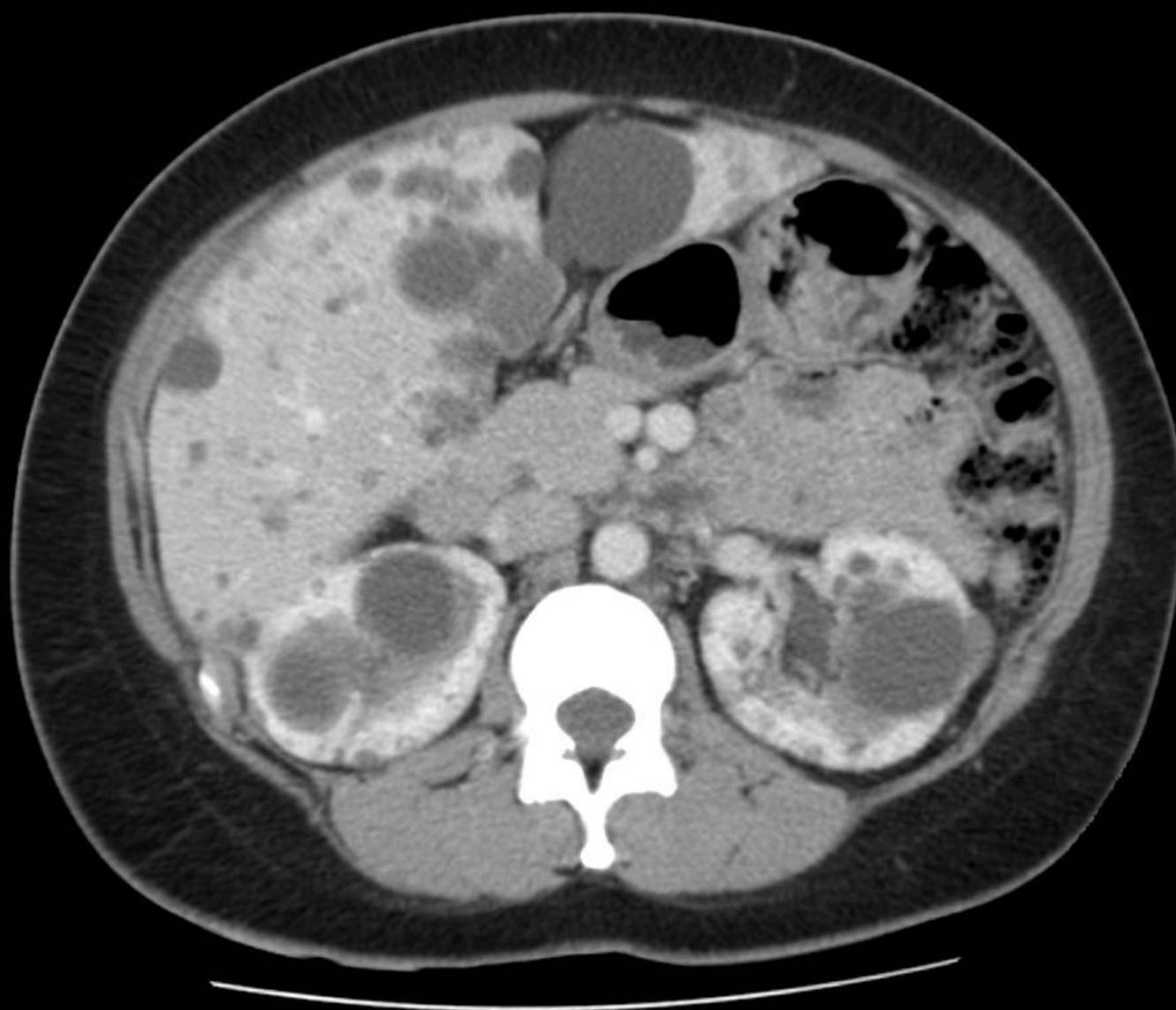
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Dashboard

Overall score: **0%**

1 -



□ Question 138 of 144



A 45-year-old man is referred to ambulatory care by his GP due to bilateral leg swelling and a subsequent urine dipstick showing proteinuria. He is otherwise fit with no past medical history and works as a school caretaker. He had a throat infection and joint pain two weeks ago which was treated with penicillin by his GP. This has been associated with some arthralgia and myalgia. He was beginning to feel better when the leg swelling started.

On examination he has bilateral pitting oedema to the knees. His JVP is not raised and his heart sounds are normal. His chest is clear and his throat does not appear infected currently. His abdomen is soft with no masses. He has no rash or joint swelling.

His urine dipstick shows 3+ protein.

His blood tests are as follows:

Hb	118 g/l	Na ⁺	131 mmol/l
Platelets	190 * 10 ⁹ /l	K ⁺	4.7 mmol/l
WBC	8 * 10 ⁹ /l	Urea	12 mmol/l
Neuts	5.5 * 10 ⁹ /l	Creatinine	131 µmol/l
Albumin	29g/l	CRP	25 mg/l

He is admitted and further testing reveals the following:

US kidneys - Normal size kidneys with no evidence of obstruction in the renal system.

Antistreptolysin O titre	104 IU (negative)
Complement C3 & C4	Mildly raised
Antiphospholipase A2 antibody	Positive
Double-stranded DNA	Normal
Anti-neutrophil cytoplasmic antibody	Negative

He has a renal biopsy which shows thickened basement membranes with subepithelial deposits on electron microscopy.

What is the most likely cause of his membranous glomerulonephritis?

	Anti-phospholipid syndrome
	Idiopathic
	Lupus nephritis
	Penicillin
	Post-infectious

Dashboard

Overall score: 0%

1 -

□ Question 138 of 144



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Dashboard

Overall score: **0%**
1 -

Question 138 of 144

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On examination he has bilateral pitting oedema, chest is clear and his throat does not appear inflamed. There is no joint swelling.

His urine dipstick shows 3+ protein.

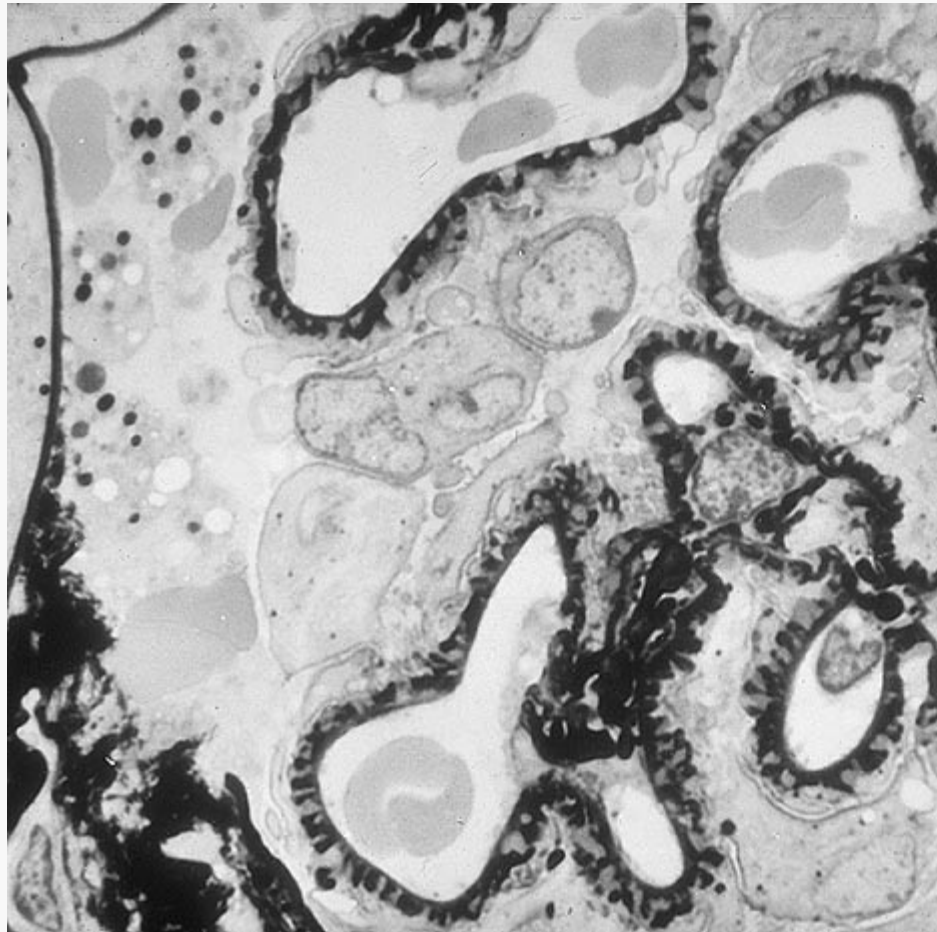
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	Idiopathic
	Lupus nephritis
	Penicillin
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Dashboard

Overall score: **0%**
1 -

□ Question 139 of 144



You are seeing a 78 year old man in renal outpatient clinic with known CKD4. He is feeling much better than he did last time he saw you in clinic and only occasionally feels slightly tired, a problem which is only occasionally limiting. You saw him three months ago with similar problems and had started him on iron replacement therapy (ferrous fumarate 210mg three times daily). His bloods at clinic three months ago and today are shown below:

Three months ago:

Hb	77 g/l
Platelets	$178 \times 10^9/l$
WBC	$3.2 \times 10^9/l$
MCV	71 fl
Ferritin	78 ng/ml
Transferrin saturations	12%
B12	451 pg/ml
Folate	4.8 nmol/nl
TSH	2.1 mIU/L

Today:

Hb	101 g/l
Platelets	$172 \times 10^9/l$
WBC	$4.5 \times 10^9/l$
MCV	78 fl
Ferritin	621 ng/ml
Transferrin saturations	21%

B12	721 pg/ml
Folate	3.8 nmol/nl
TSH	2 mIU/L

What would you do next?

	Increase his ferrous fumarate to 210mg four times daily
	Decrease his ferrous fumarate to 210mg twice daily
	Do not change any of his medications
	Transfuse him 1 unit of packed red cells
	Start an ESA (erythrocyte colony stimulating agent)

Dashboard

Overall score: 0%

1 -

□ Question 139 of 144



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	Start an ESA (erythrocyte colony stimulating agent)

Dashboard

Overall score: **0%**

1 -

□ Question 140 of 144

□ □

A 26-year-old male presented to the Emergency Department with increasing shortness of breath. Prior to his presentation two weeks ago he presented to his GP with three episodes of frank haematuria which was treated empirically with trimethoprim 200mg BD for one week as a suspected urinary tract infection. He since complained of shortness of breath starting two days ago initially affecting mild exertion but progressively increasing in severity. At the time of presentation he was short of breath at rest and unable to complete a full sentence. Whilst in hospital he was noted to cough small amounts of bright red blood on four occasions. Other than a past medical history of asthma for which he used Clenil modulite 200mcg BD inh and salbutamol PRN he was otherwise fit and well. He smoked 15 cigarettes per day and consumed 40 units of alcohol per week. There was no family history of note, and he recently returned from a holiday in Spain a few weeks ago. There was no history of exposure to tuberculosis.

On examination he was severely tachypnoeic at rest. His heart rate was 125 bpm, respiratory rate 28/min, temperature 37.6°C, oxygen saturations 92% on 15l/min of oxygen and blood pressure 108/78 mmHg. Examination of the cardiovascular examination revealed the presence of a rapid regular tachycardia with cool clammy peripheries. Respiratory examination revealed the presence of bilateral crackles and bronchial breathing in the lower zones. Gastrointestinal and neurological examination were unremarkable.

Initial investigations revealed the following:

Hb	78 g/l
MCV	78 fl
Platelets	486 * 10 ⁹ /l
WBC	11.0 * 10 ⁹ /l

Na ⁺	135 mmol/l
K ⁺	6.2 mmol/l
Urea	26 mmol/l
Creatinine	520 µmol/l
Glucose	6.6 mmol/l

ECG: heart rate 128bpm sinus tachycardia
Chest x-ray: bilateral patchy alveolar shadowing affecting lower zones

Urinalysis: blood ++++ protein +++ glucose negative leucocytes/nitrites negative ketones ++

ABG on 15l/min of oxygen:

PaO2	6.2 kPa
PaCO2	1.8 kPa
PH	7.52
HC03-	26 mmol/l

He was quickly transferred to the intensive care unit. Which is the single most appropriate initial management strategy?

	Commencement of intravenous meropenem therapy
	High dose intravenous corticosteroid therapy
	Rapid induction cyclophosphamide therapy
	Infusion of intravenous immunoglobulin
	Repeated plasmapheresis

Dashboard

Overall score: 0%

1 -

□ Question 140 of 144

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Dashboard
Overall score: 0% 1 -

□ Question 141 of 144

□ □

A 67 year old man is admitted electively for an inguinal hernia repair. He has a history of hypothyroidism, aortitis and hypertension. His regular medication consists of levothyroxine 75 micrograms daily, mycophenolate mofetil 1 gram twice daily, prednisolone 5mg daily maintenance, ramipril 5mg daily and amlodipine 5mg daily. He has no known allergies. His operation went well with no intra-operative complications.

The next morning his bloods show:

Sodium	139 mmol/L
Potassium	5.6 mmol/L
Urea	15.5 mmol/L
Creatinine	342 micromol/L

His pre-operative values were:

Sodium	137 mmol/L
Potassium	4.4 mmol/L
Urea	6.2 mmol/L
Creatinine	121 micromol/L

When you review the observations he has had an adequate blood pressure throughout the operation and since. He appears euvolaemic clinically with adequate urine output. He had suspended his mycophenolate therapy two weeks prior to the operation as instructed by his consultant in rheumatology. Otherwise his medications were prescribed as above with some additional analgesia including tramadol and ibuprofen as required. You decide to suspend his nephrotoxic drugs and repeat his bloods the next morning.

According to NICE guidelines on the management of acute kidney injury (AKI), which of the following should trigger a referral to nephrology?

	AKI on a background of chronic kidney disease (CKD) stage 2 or more
	AKI in patients over the age of 65 years
	AKI in a patient with known vasculitis
	AKI caused by nephrotoxic drugs, eg, non steroidal anti inflammatory drugs
	AKI caused by hypovolaemia

Dashboard

Overall score: **0%**
1 -

□ Question 141 of 144

□ □

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Dashboard

Overall score: **0%**

1 -

Question 142 of 144

□ □

A 49-year-old known rheumatoid arthritis patient is admitted via the emergency department with a one-month history of intermittent left flank pain and bloody urine. She has had no diarrhoea or rectal bleeding. She has been a bit tired over the last few months and recently saw her GP because she was worried her ankles were swollen. She has a past medical history of hypertension. Her regular medication is penicillamine and valsartan. On examination, her abdomen is soft with mild left flank tenderness. There is no palpable hepatosplenomegaly. She has pitting oedema to the knee. Her urine dip shows 3+ of protein and 1+ RBCs.

Her blood tests show

Hb	118 g/l
Platelets	419 * 10 ⁹ /l
WBC	4.7 * 10 ⁹ /l

Na ⁺	133 mmol/l
K ⁺	4.3 mmol/l
Urea	28 mmol/l
Creatinine	328 µmol/l
CRP	11 mg/l

Bilirubin	17 µmol/l
ALP	89 u/l
ALT	11 u/l
Albumin	23 g/l

What is the most likely cause of her flank pain?

	Inflammatory bowel disease
	Renal vein thrombosis
	Pyelonephritis
	Adult polycystic kidney disease
	Renal colic

Dashboard

Overall score: **0%**

1 -

Question 142 of 144

□ □

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Dashboard

Overall score: **0%**
1 -

Question 143 of 144

□ □

A 45 year-old man attended for routine review in the HIV clinic. He had been taking highly-active retroviral therapy for 6 years and had been well during this time. He had no other past medical history of note.

Urinalysis performed in clinic showed protein 4+ and blood 1+. Examination revealed minimal oedema of both ankles. Cardiovascular, respiratory and abdominal examinations were unremarkable.

What is the most likely diagnosis?

	Post-infectious glomerulonephritis
	Focal segmental glomerulosclerosis
	Minimal change disease
	Acute interstitial nephritis
	IgA nephropathy

Dashboard

Overall score: 0%

1 -

Question 143 of 144

□ □

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Dashboard

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1 -

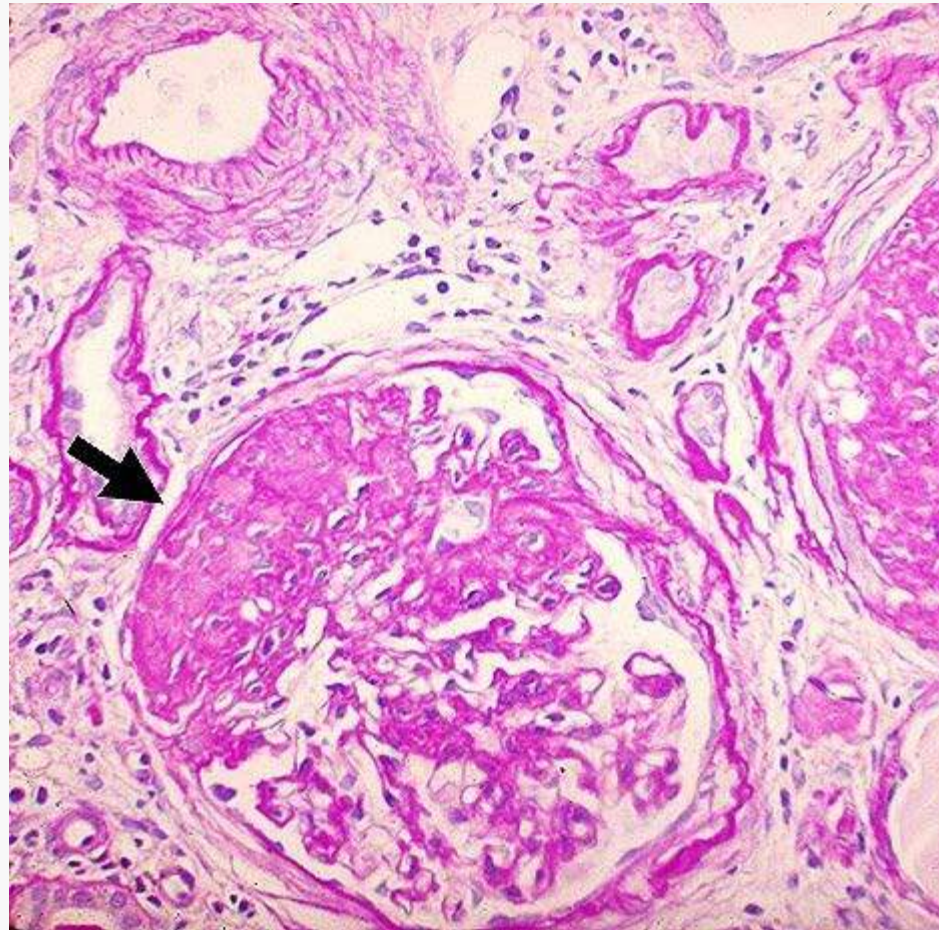
Question 143 of 144

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<input type="radio"/>	Post-infectious glomerulonephritis
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Dashboard

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1 -

□ Question 143 of 144

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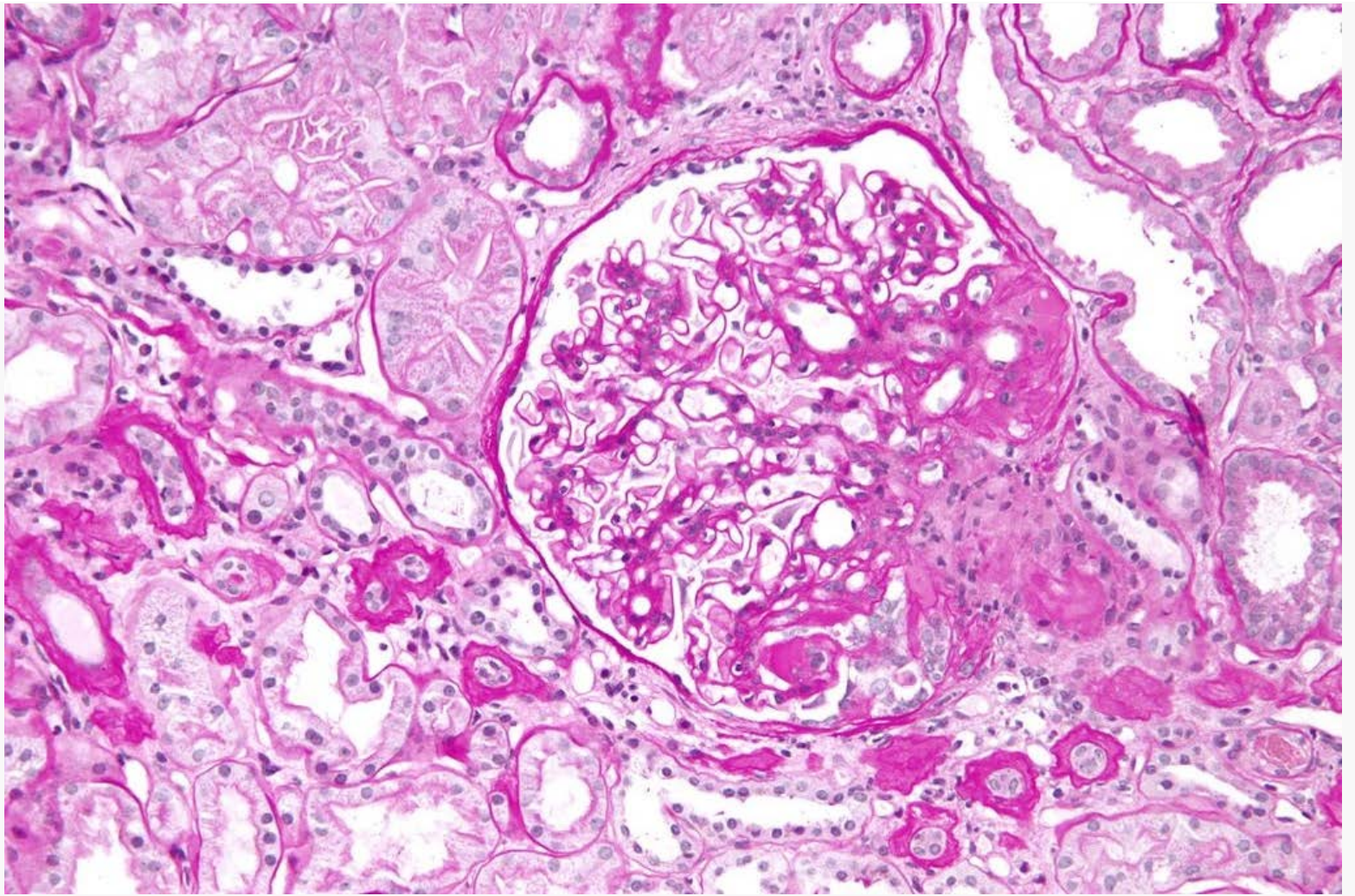
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	Minimal change disease
	Acute interstitial nephritis
	IgA nephropathy

Dashboard

Overall score: **0%**

1 -



Question 144 of 144

□ □

A 17 year old presents to the renal outpatient clinic complaining of 4 months of increasing malaise at school. He has been on haemodialysis three times a week for the past 10 months after his renal function deteriorated at age 13, following a diagnosis of focal segmental glomerulosclerosis. He is currently on the list of renal transplant. He denies any recent illnesses. Examination is unremarkable except for a mild systolic heart murmur. His blood tests are as follows:

Hb	8.3 g/dl
MCV	70 fl
Ferritin	28 microg/l (normal range 30-400 microg/L)
K ⁺	5.2 mmol/l
Urea	30.3 mmol/l
Creatinine	460 µmol/l

What is the most appropriate treatment?

	Red blood cell transfusion
	Erythropoietin therapy
	Oral iron replacement therapy
	Monitor haemoglobin, transfuse if haemoglobin under 8 g/l
	Prioritise for renal transplant urgently

Dashboard

Overall score: 0%

Question 144 of 144



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	Monitor haemoglobin, transfuse if haemoglobin under 8 g/l
	Prioritise for renal transplant urgently

Dashboard

Overall score: **0%**

□ Question 1 of 200

□ □

A 52-year-old man presents to the emergency department with shortness of breath. This started recently following a flight from Australia. He is morbidly obese and has a **past medical history** of type two diabetes mellitus, high cholesterol, hypertension and a previous cholecystectomy. He denies any leg pain or swelling and denies any chest pain. Observations are stable, and an **ECG** demonstrates sinus rhythm. A **chest X-ray** is clear. He undergoes a **CT pulmonary angiogram (CTPA)** to exclude a pulmonary embolus (PE). The CTPA is reported as finding no evidence of PE but notes a 7mm pulmonary nodule in the left lower lobe.

How should the pulmonary nodule be investigated or monitored?

<input type="checkbox"/>	Urgent CT-PET
<input type="checkbox"/>	Urgent image-guided biopsy
<input type="checkbox"/>	CT chest in three months
<input type="checkbox"/>	CT chest in one year
<input type="checkbox"/>	No further investigations needed

Dashboard

Overall score: 0%

1 -

□ Question 1 of 200

□ □

A 52-year-old man presents to the emergency department with shortness of breath. This started recently following a flight from Australia. He is morbidly obese and has a past medical history of type two diabetes mellitus, high cholesterol, hypertension and a previous cholecystectomy. He denies any leg pain or swelling and denies any chest pain. Observations are stable, and an ECG demonstrates sinus rhythm. A chest X-ray is clear. He undergoes a CT pulmonary angiogram (CTPA) to exclude a pulmonary embolus (PE). The CTPA is reported as finding no evidence of PE but notes a 7mm pulmonary nodule in the left lower lobe.

How should the pulmonary nodule be investigated or monitored?

	Urgent CT-PET
	Urgent image-guided biopsy
	CT chest in three months
	CT chest in one year
	No further investigations needed

Dashboard

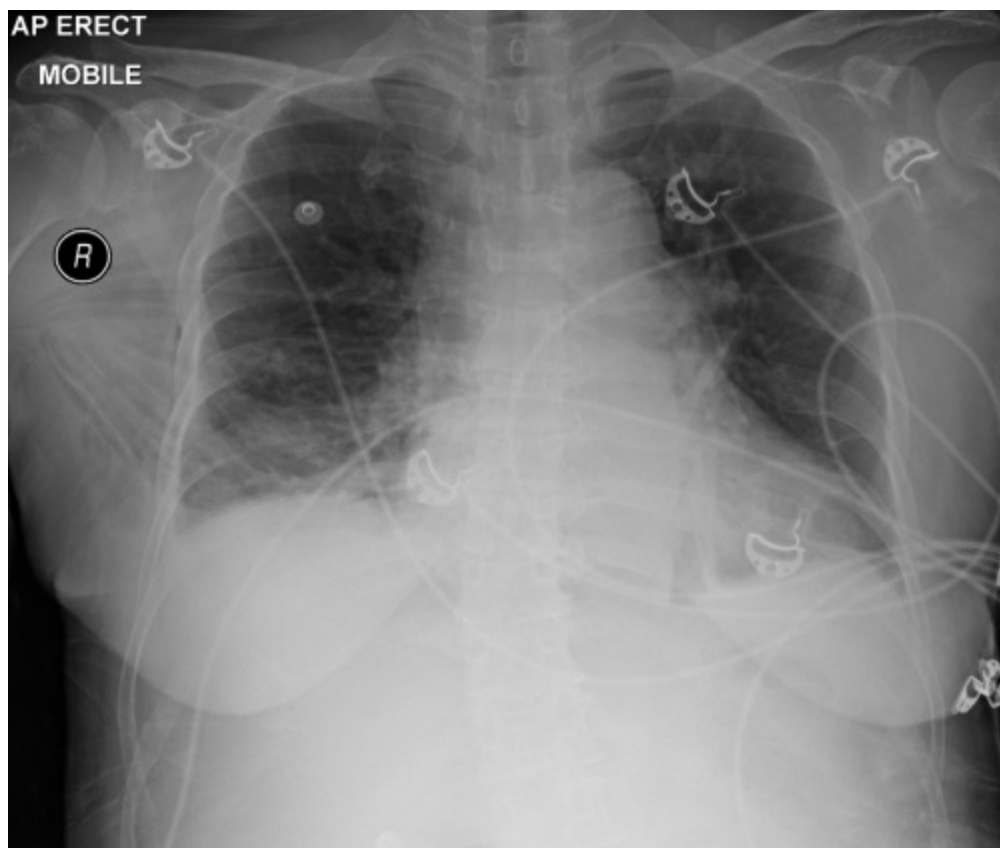
Overall score: 0%

1 -

□ Question 2 of 200



You are asked to review a 65-year-old woman who has become breathless on the surgical ward. Earlier in the day she had a laparoscopic cholecystectomy for gallstone disease. A chest x-ray has already been obtained:



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What complication has developed?

	Pneumothorax
	Intestinal perforation resulting in pneumoperitoneum

	Subcutaneous emphysema
	Pulmonary embolism
	Acute respiratory distress syndrome

Dashboard

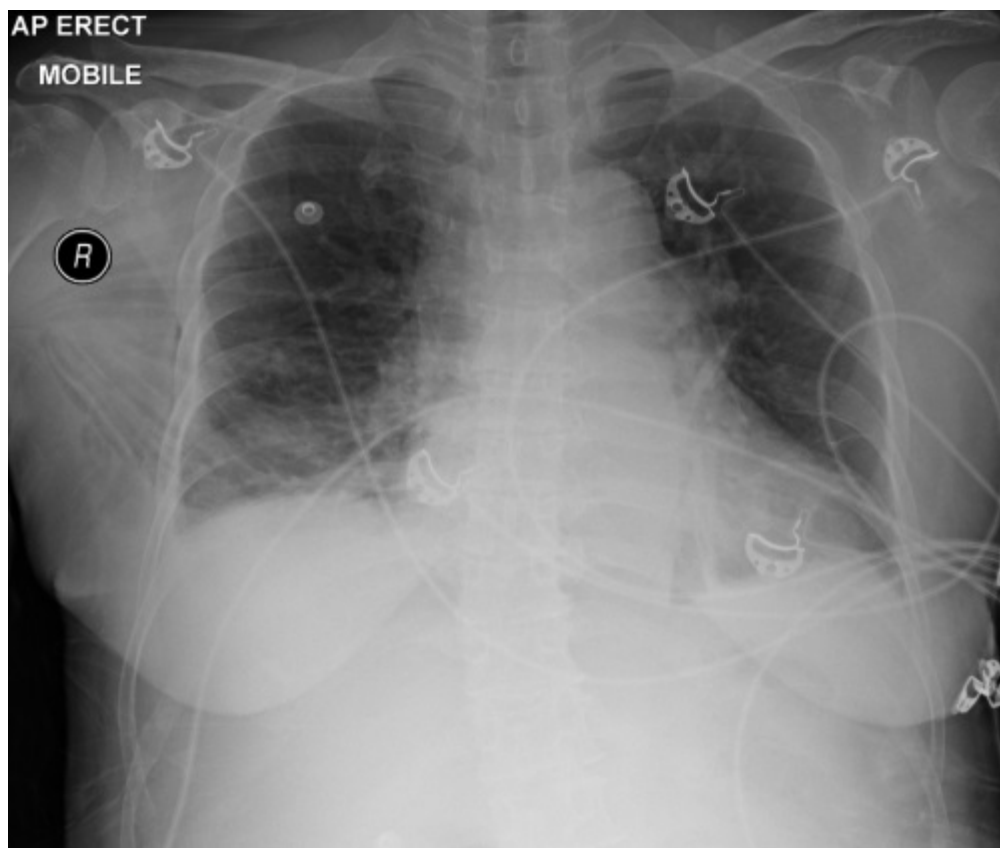
Overall score: 0%

1 -

Question 2 of 200



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What complication has developed?

Pneumothorax

Intestinal perforation resulting in pneumoperitoneum

	Subcutaneous emphysema
	Pulmonary embolism
	Acute respiratory distress syndrome

Dashboard

Overall score: **0%**
1 -

Question 3 of 200

□ □

A 29-year-old man with a body mass index of 36 kg/m^2 is referred by his GP for sleep studies, which show an apnoea-hypopnoea index (AHI) of 31. He has a lengthy history of worsening daytime sleepiness over the last ten years and his Epworth questionnaire score is 20. As he sleeps alone there is no collateral history available but is otherwise healthy with no past medical history. Which is most appropriate next step?

	Mandibular advancement device
	Weight loss with orlistat and repeat studies in 6 weeks
	Adenotonsillectomy
	Bariatric surgery
	Trail of overnight CPAP

Dashboard

Overall score: 0%

1 -

Question 3 of 200

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	Weight loss with orlistat and repeat studies in 6 weeks
	Adenotonsillectomy
	Bariatric surgery
	Trail of overnight CPAP

Dashboard

Overall score: **0%**

1 -

Question 4 of 200

A 55-year-old lady with a new diagnosis of chronic obstructive pulmonary disease (COPD) is admitted to the ward and treated for an infective exacerbation of COPD. She tells you she is currently smoking 10 cigarettes per day. She has a family history of lung cancer. Her chest x ray is reported as showing emphysematous changes. She mentions that her parents and her siblings also suffer from the same disease. She asks you what the best thing is to do to improve her prognosis?

<input type="checkbox"/>	Inhaler technique and compliance
<input type="checkbox"/>	Lung reduction surgery
<input type="checkbox"/>	Stop smoking
<input type="checkbox"/>	Long term oxygen therapy
<input type="checkbox"/>	Home nebulisers

Dashboard

Overall score: 0%

1 -

Question 4 of 200

A 55-year-old lady with a new diagnosis of chronic obstructive pulmonary disease (COPD) is admitted to the ward and treated for an infective exacerbation of COPD. She tells you she is currently smoking 10 cigarettes per day. She has a family history of lung cancer. Her chest x ray is reported as showing emphysematous changes. She mentions that her parents and her siblings also suffer from the same disease. She asks you what the best thing is to do to improve her prognosis?

	Inhaler technique and compliance
	Lung reduction surgery
	Stop smoking
	Long term oxygen therapy
	Home nebulisers

Dashboard

Overall score: **0%**

1 -

□ Question 5 of 200

□ □

A 60-year-old man, recently diagnosed to have seropositive rheumatoid arthritis presented with progressive shortness of breath and dry cough for the past 3 weeks. He was started on methotrexate at a dose of 10 mg per week, 2 months back by his treating physician.

On examination, his pulse rate was 120/min, respiratory rate was 24/min, blood pressure was 130/80 mmHg. His SpO₂ in room air was 88%. Auscultation of the chest showed bilateral basal crackles.

A CT chest was taken which showed bilateral diffuse ground glass changes with peripheral reticular lines and few patchy consolidative changes. The treating respiratory physician made a provisional diagnosis of methotrexate induced lung injury.

What would you suggest to prevent further lung damage?

	Folic acid supplementation
	Oxygen supplementation
	Switching from weekly to lower dose daily administration of methotrexate
	Decreasing the dose of methotrexate
	Prednisolone

Dashboard

Overall score: 0%

1 -

Question 5 of 200

□ □

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What would you suggest to prevent further lung damage?

	Folic acid supplementation
	Oxygen supplementation
	Switching from weekly to lower dose daily administration of methotrexate
	Decreasing the dose of methotrexate
	Prednisolone

Dashboard

Overall score: **0%**

1 -

□ Question 6 of 200



A 68-year-old man presents to the Emergency Department with a two-day history of chest pain associated with fever and a productive cough. He has a background of hypertension for which he takes amlodipine but is otherwise fit and well. The patient lives alone and smokes 5 cigarettes per day. He denies any history of alcohol or illicit drug use. There is no history of weight loss, haemoptysis, recent foreign travel or any pets.

On examination he looks unwell and is pyrexial. Cardiovascular examination reveals a heart rate of 100 beats/minute, regular and cool peripherals with a blood pressure of 100/65 mmHg. Respiratory examination shows a respiratory rate of 32 breaths/minute with oxygen saturations of 88% on room air and bronchial breathing is heard in the left lower zone. Pleuritic chest pain is also noted on the left hand side. Gastrointestinal examination is normal. The patient is disorientated in time and space but can obey commands and no neurological deficit is noted.

A chest x-ray shows consolidation in the left lower lobe but no pleural effusion is seen. Haematology and biochemistry results are shown below:

Haemoglobin	125 g/l
White cell count	14 * 10 ⁹ /l (a neutrophilia is noted)
Platelets	310* 10 ⁹ /l
Sodium	140 mmol/l
Potassium	3.7 mmol/l
Urea 8.1	mmol/l
Creatinine 146 µmol/l	
C-reactive protein 67 mg/l	

Liver function tests are unremarkable

The Emergency Department team have started the patient on oxygen and have obtained intravenous access and began resuscitation with 0.9% saline. As the medical registrar on call you are asked to form a plan for further management.

What is the most appropriate management plan for this patient?

	Begin double agent intravenous antibiotics and add an additional agent to cover for legionella while admitting to hospital
	Begin double agent intravenous antibiotics and admit to hospital
	Begin oral antibiotics and admit to a hospital
	Begin oral antibiotics and review in 1 hour with a view to discharge if clinically improving
	Begin single agent intravenous antibiotics and admit to hospital

Dashboard

Overall score: **0%**

1 -

□ Question 6 of 200



A 68-year-old man presents to the Emergency Department with a two-day history of chest pain associated with fever and a productive cough. He has a background of hypertension for which he takes amlodipine but is otherwise fit and well. The patient lives alone and smokes 5 cigarettes per day. He denies any history of alcohol or illicit drug use. There is no history of weight loss, haemoptysis, recent foreign travel or any pets.

On examination he looks unwell and is pyrexial. Cardiovascular examination reveals a heart rate of 100 beats/minute, regular and cool peripherals with a blood pressure of 100/65 mmHg. Respiratory examination shows a respiratory rate of 32 breaths/minute with oxygen saturations of 88% on room air and bronchial breathing is heard in the left lower zone. Pleuritic chest pain is also noted on the left hand side. Gastrointestinal examination is normal. The patient is disorientated in time and space but can obey commands and no neurological deficit is noted.

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	Begin oral antibiotics and review in 1 hour with a view to discharge if clinically improving
	Begin single agent intravenous antibiotics and admit to hospital

Dashboard

Overall score: **0%**

1 -

□ Question 7 of 200

□ □

You review the chest x-ray of a 35-year-old man who started treatment for a chest infection two weeks ago. He completed a one week course of antibiotics but still feels short-of-breath on exertion. He has a 15 pack-year history of smoking.

On examination his respiratory rate is 16/min, saturations 98% on room air and auscultation of his chest is unremarkable.

His chest x-ray is shown below:



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What does the chest x-ray show?

	Right lower lobe collapse
	Lung tumour
	Pleural effusion
	Elevated right hemidiaphragm
	Persistent consolidation

Dashboard

Overall score: 0%

1 -

□ Question 7 of 200

□ □

You review the chest x-ray of a 35-year-old man who started treatment for a chest infection two weeks ago. He completed a one week course of antibiotics but still feels short-of-breath on exertion. He has a 15 pack-year history of smoking.

On examination his respiratory rate is 16/min, saturations 98% on room air and auscultation of his chest is unremarkable.

His chest x-ray is shown below:



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What does the chest x-ray show?

	Right lower lobe collapse
	Lung tumour
	Pleural effusion
	Elevated right hemidiaphragm
	Persistent consolidation

Dashboard

Overall score: **0%**

1 -

Question 8 of 200

□ □

A 38-year-old woman is referred to the respiratory clinic due to a pulmonary nodule detected on a CT scan. She was admitted to her local hospital two months ago with aspiration pneumonia and treated with intravenous antibiotics. A chest X-ray demonstrated left-sided consolidation. She was also managed for alcohol withdrawal. She required three days of in hospital before being discharged with oral antibiotics and community alcohol liaison services to follow-up. Her GP repeated her chest X-ray six weeks following discharge and was concerned that an area of consolidation remained on the repeat chest X-ray. The GP, therefore, arranged for a CT chest which demonstrated a pulmonary nodule 5mm in diameter on the right side. There was no evidence of consolidation. How should this nodule be investigated or monitored?

	Urgent CT-PET
	Urgent image-guided biopsy
	CT chest in three months
	CT chest in one year
	No further investigations needed

Dashboard

Overall score: 0%

1 -

□ Question 8 of 200

□ □

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	Urgent CT-PET
	Urgent image-guided biopsy
	CT chest in three months
	CT chest in one year
	No further investigations needed

Dashboard

Overall score: 0%

1 -

□ Question 9 of 200



A 63 year old gentleman presented to the acute medical unit with a 3 day history of increasing shortness of breath and cough. He is known to have chronic obstructive pulmonary disease (COPD) and is treated as an infective exacerbation of COPD.

He has a past medical history of ischaemic heart disease, type 2 diabetes mellitus, hypothyroidism, hypercholesterolaemia, hypertension, epilepsy and osteoarthritis.

Despite nebulisers, steroids and antibiotics, he remains acutely breathless and his oxygen saturations are only 83% on air.

Blood gas analysis is as follows:

pH	7.21
pCO ₂	10.1 kPa
pO ₂	7.3 kPa
BE	-4.2 mmol/l
HCO ₃ ⁻	36 mEq/l

You opt to try non invasive ventilation (NIV) and he is transferred to the NIV unit. Initial settings on NIV are IPAP (inspiratory positive airways pressure) 10 cm H₂O and EPAP (expiratory positive airways pressure) 4 cm H₂O. He remains tachypnoeic and has oxygen saturations of 88%. His repeat blood gas after 1 hour is as follows:

pH	7.25
pCO ₂	9.9 kPa
pO ₂	9.3 kPa
BE	-4.0 mmol/l
HCO ₃ ⁻	35 mEq/l

Firstly, how would you adjust the NIV settings?

	Increase IPAP by 2 cm H2O
	Increase EPAP by 2 cm H2O
	Increase IPAP and EPAP by 2 cm H2O
	No change in settings
	Add extra inspired oxygen to NIV at 24%

Dashboard

Overall score: **0%**

1 -

□ Question 9 of 200



A 63 year old gentleman presented to the acute medical unit with a 3 day history of increasing shortness of breath and cough. He is known to have chronic obstructive pulmonary disease (COPD) and is treated as an infective exacerbation of COPD.

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	No change in settings
	Add extra inspired oxygen to NIV at 24%

Dashboard

Overall score: **0%**

1 -

Question 10 of 200

□ □

A 77-year-old man with longstanding chronic obstructive pulmonary disease (COPD) attends the respiratory clinic with worsening symptoms of shortness of breath. He is currently taking salbutamol and formoterol inhalers.

On examination, he is afebrile with intermittent expiratory wheeze bilaterally. He has a forced expiratory volume in one second (FEV1) recording of < 50%.

Which of the following drugs should be added next?

	Oral slow release theophylline
	Oral mucolytic
	Change formoterol to combined fluticasone-salmeterol inhaler
	Oral alpha tocopherol
	Oral prophylactic antibiotics

Dashboard

Overall score: 0%

1 -

□ Question 10 of 200

□ □

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	Oral alpha tocopherol
	Oral prophylactic antibiotics

Dashboard

Overall score: **0%****1** -

Question 11 of 200

□ □

A 37-year-old lady presents to the Emergency Department with a 4-hour history of sudden-onset chest pain and dyspnoea. Her symptoms started whilst she was watching television. She describes the pain as severe, central and non-radiating. She denies a cough and haemoptysis. Her past medical history is unremarkable and her only regular medication is the oral contraceptive pill.

Examination reveals an overweight lady with a pulse rate of 114/min and a blood pressure of 101/63mmHg. Her respiratory rate is 22 and her oxygen saturations are 94% on air. Her JVP is 5cm but there is no peripheral oedema. Auscultation of the chest reveals scattered crepitations. Her heart sounds are dual with no audible murmurs. A portable chest x-ray shows clear lung fields.

A short time later the patient's blood pressure is recorded at 90/59mmHg. A bedside echocardiogram shows elevated right ventricular filling pressures with evidence of strain. What is the most appropriate management?

	Surgical embolectomy
	Alteplase
	Unfractionated heparin
	Aspirin, clopidogrel, low molecular weight heparin and furosemide
	Low molecular weight heparin

Dashboard

Overall score: 0%

1 -

Question 11 of 200

□ □

A 37-year-old lady presents to the Emergency Department with a 4-hour history of sudden-onset chest pain and dyspnoea. Her symptoms started whilst she was watching television. She describes the pain as severe, central and non-radiating. She denies a cough and haemoptysis. Her past medical history is unremarkable and her only regular medication is the oral contraceptive pill.

Examination reveals an overweight lady with a pulse rate of 114/min and a blood pressure of 101/63mmHg. Her respiratory rate is 22 and her oxygen saturations are 94% on air. Her JVP is 5cm but there is no peripheral oedema. Auscultation of the chest reveals scattered crepitations. Her heart sounds are dual with no audible murmurs. A portable chest x-ray shows clear lung fields.

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	Alteplase
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Dashboard

Overall score: **0%**

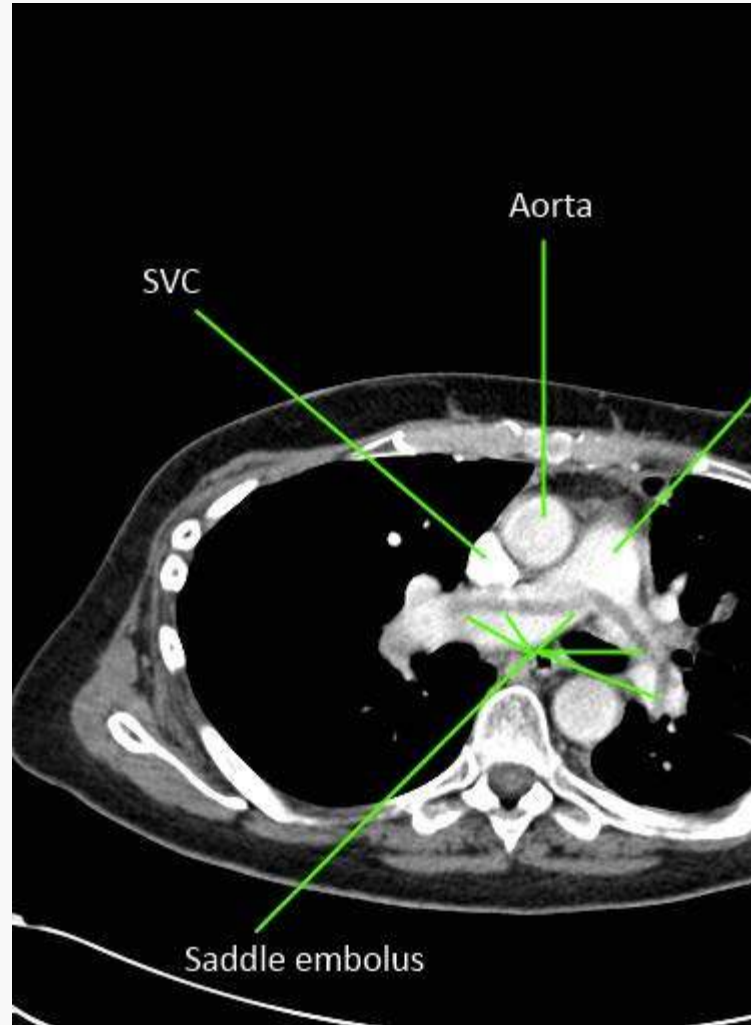
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Question 11 of 200

A 37-year-old lady presents to the Emergency Department with dyspnoea. Her symptoms started whilst she was watching television. She denies a cough and haemoptysis. Her past medical history is unremarkable. Her past medication is the oral contraceptive pill.

Examination reveals an overweight lady with a pulse rate of 110 bpm, respiratory rate is 22 and her oxygen saturations are 94% on room air. Auscultation of the chest reveals scattered crepitations. Her heart rate is 110 bpm. Her chest x-ray shows clear lung fields.

A short time later the patient's blood pressure is recorded at 90/60 mmHg. Her right ventricular filling pressures with evidence of strain. What is the most appropriate management?



Surgical embolectomy

Alteplase

Unfractionated heparin

Aspirin, clopidogrel, low molecular weight heparin and furosemide

Low molecular weight heparin

Dashboard

Overall score: 0%

1 -

Question 11 of 200

□ □

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	Low molecular weight heparin

Dashboard

Overall score: **0%**

1 -

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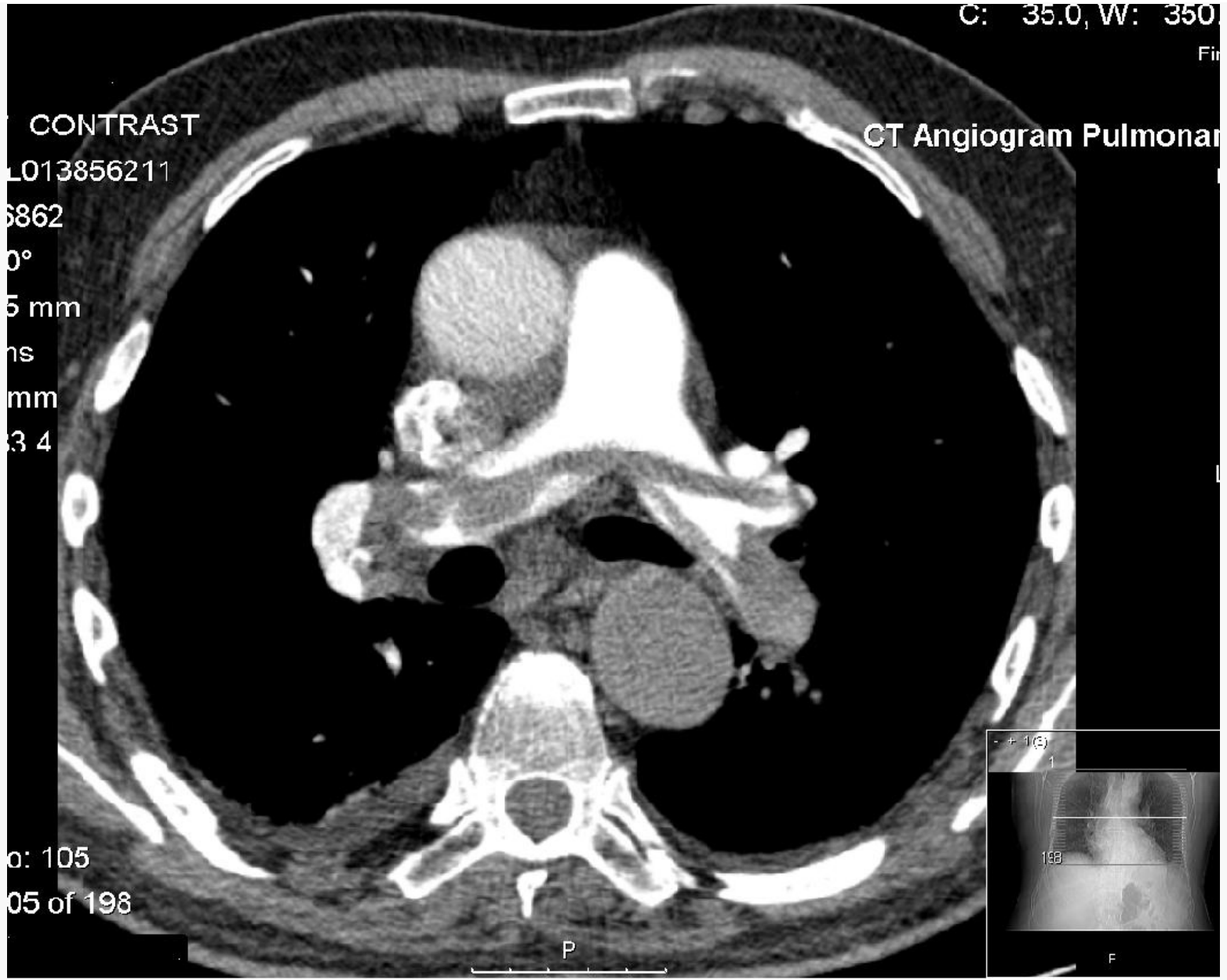
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□ Question 12 of 200

□ □

A 25-year-old gentleman was referred to the outpatient infectious diseases clinic by his GP. He had recently immigrated from Pakistan a few months ago with his extended family. A couple of weeks ago his mother who lived in the same house as him was diagnosed with respiratory tuberculosis and he was accordingly advised to get 'checked up' by his GP. He felt well in himself, stating that he recovered from a cold a few weeks ago having had symptoms of nasal congestion, sore throat and a cough lasting a few days. He has since felt well, denying the presence of any further symptoms. Of note he has not lost weight, not had a fever, and did not suffer from a cough or night sweats. He was unsure what immunisations he had whilst in Pakistan. As a precautionary measure, the GP referred him to the infectious diseases clinic given the close proximity with his mother.

Examination revealed a well looking 25-year-old gentleman. His temperature was 36.6°C, heart rate 78 bpm, respiratory rate 16/min and oxygen saturations 99% on air. He had a BCG scar on his left arm. Examination of his cardiovascular, respiratory, gastrointestinal and neurological systems were all entirely unremarkable.

Initial investigations revealed the following:

Blood film:negative; including negative malaria screen

Blood culture: negative culture; awaiting prolonged acid-fast bacilli culture result

Quantaferon blood test: positive

Mantoux test: positive

Chest x-ray: normal appearances of heart and lung fields, no abnormality was seen

Based upon the above information, what is the next best management step?

	Commence treatment with isoniazid, pyridoxine, ethambutol, rifampicin and pyrazinamide for 2 months
	Discharge from clinic with no further action to take
	Refer for diagnostic bronchoscopy alveolar lavage
	Commence isoniazid and pyridoxine for 6 months

Dashboard

Overall score: **0%**

1 -

□ Question 12 of 200

□ □

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Discharge from clinic with no further action to take

Refer for diagnostic bronchoscopy alveolar lavage

Commence isoniazid and pyridoxine for 6 months

Dashboard

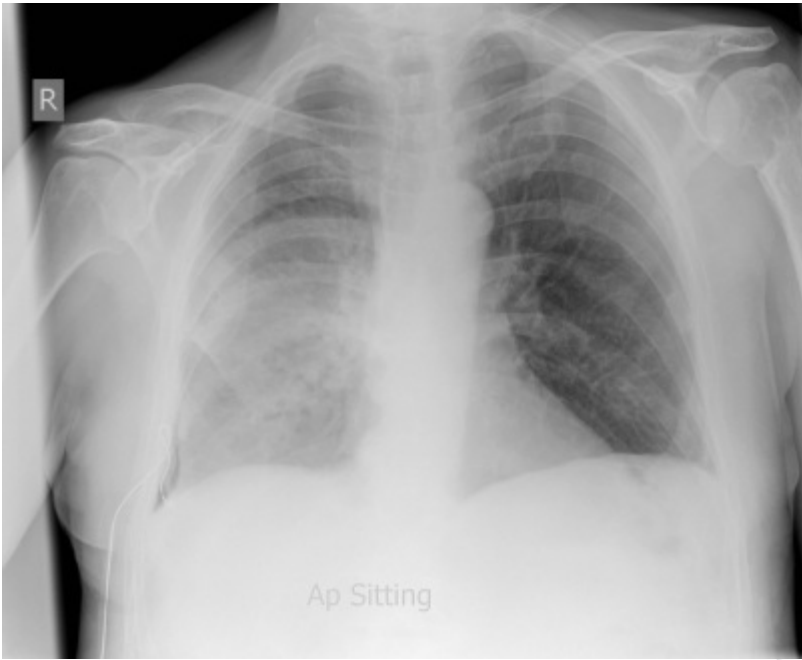
Overall score: **0%**

1 -

Question 13 of 200

□ □

A 76-year-old man presents with dyspnoea. A chest x-ray is performed:



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What is the main finding on the film?

	Right upper lobe consolidation
	Right sided pneumothorax
	Pulmonary oedema
	Right middle + lower lobe consolidation
	Bronchiectasis

Dashboard

Overall score: **0%**

1 -

Question 13 of 200

A 76-year-old man presents with dyspnoea. A chest x-ray is performed:



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What is the main finding on the film?

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	Right sided pneumothorax
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	Right middle + lower lobe consolidation
	Bronchiectasis

Dashboard

Overall score: **0%**

1 -

□ Question 13 of 200

□ □

A 76-year-old man presents with dyspnoea. A chest x-ray is performed:



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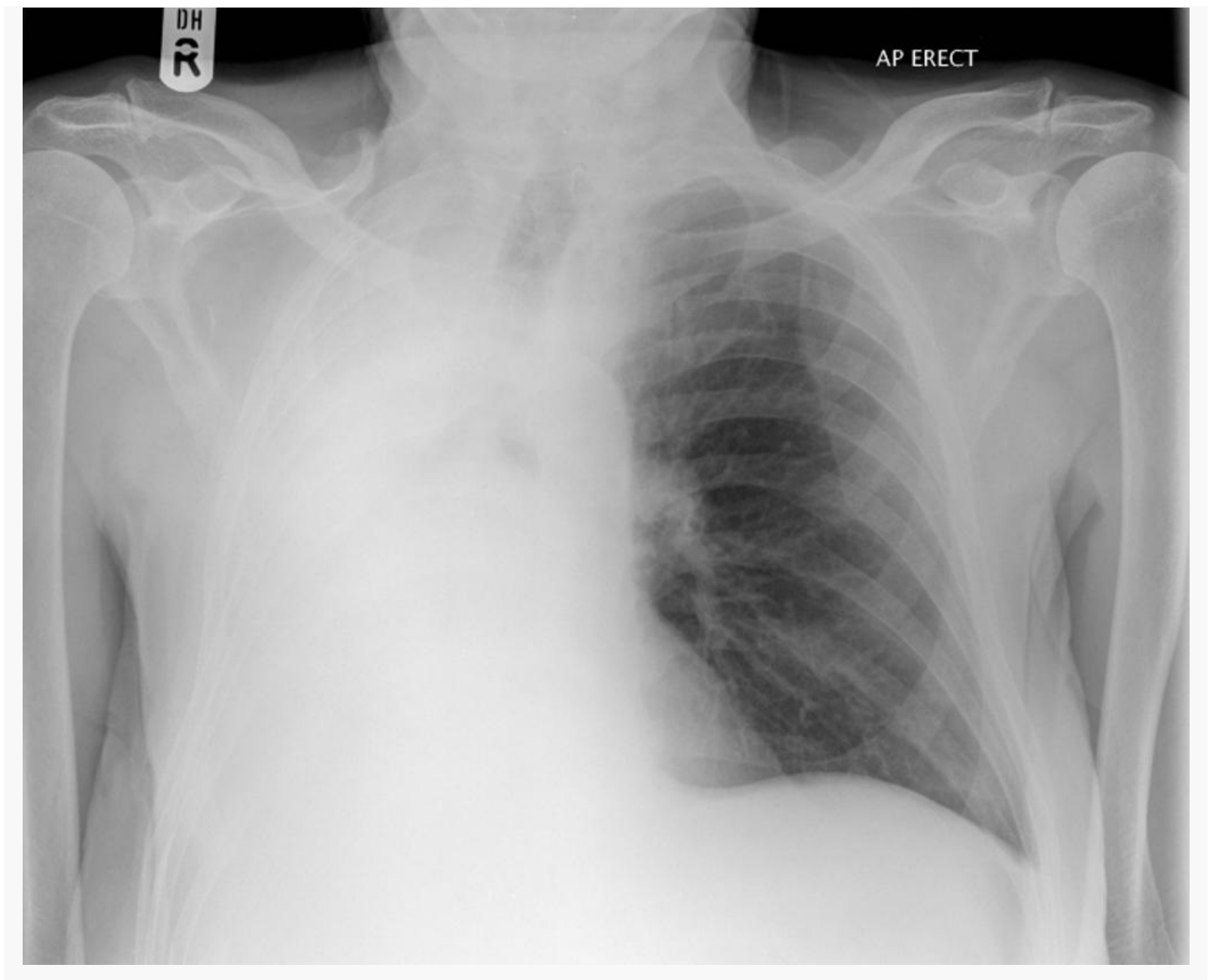


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	Pulmonary oedema
	Right middle + lower lobe consolidation

Dashboard

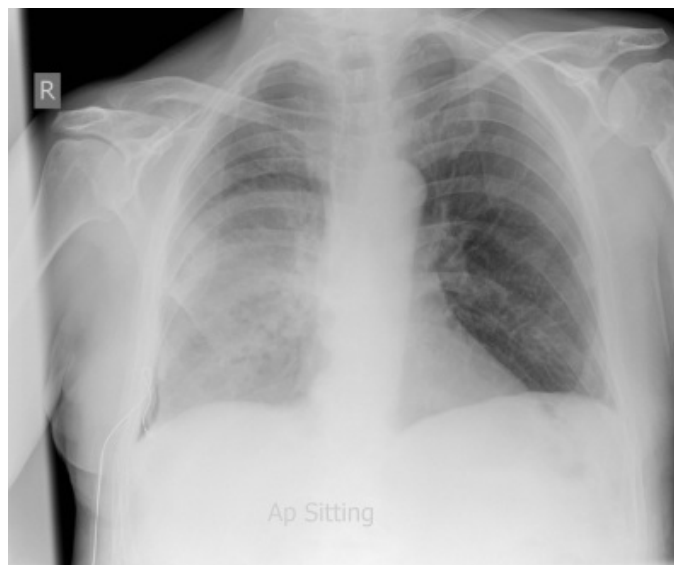
Overall score: **0%**
1 -



□ Question 13 of 200

□ □

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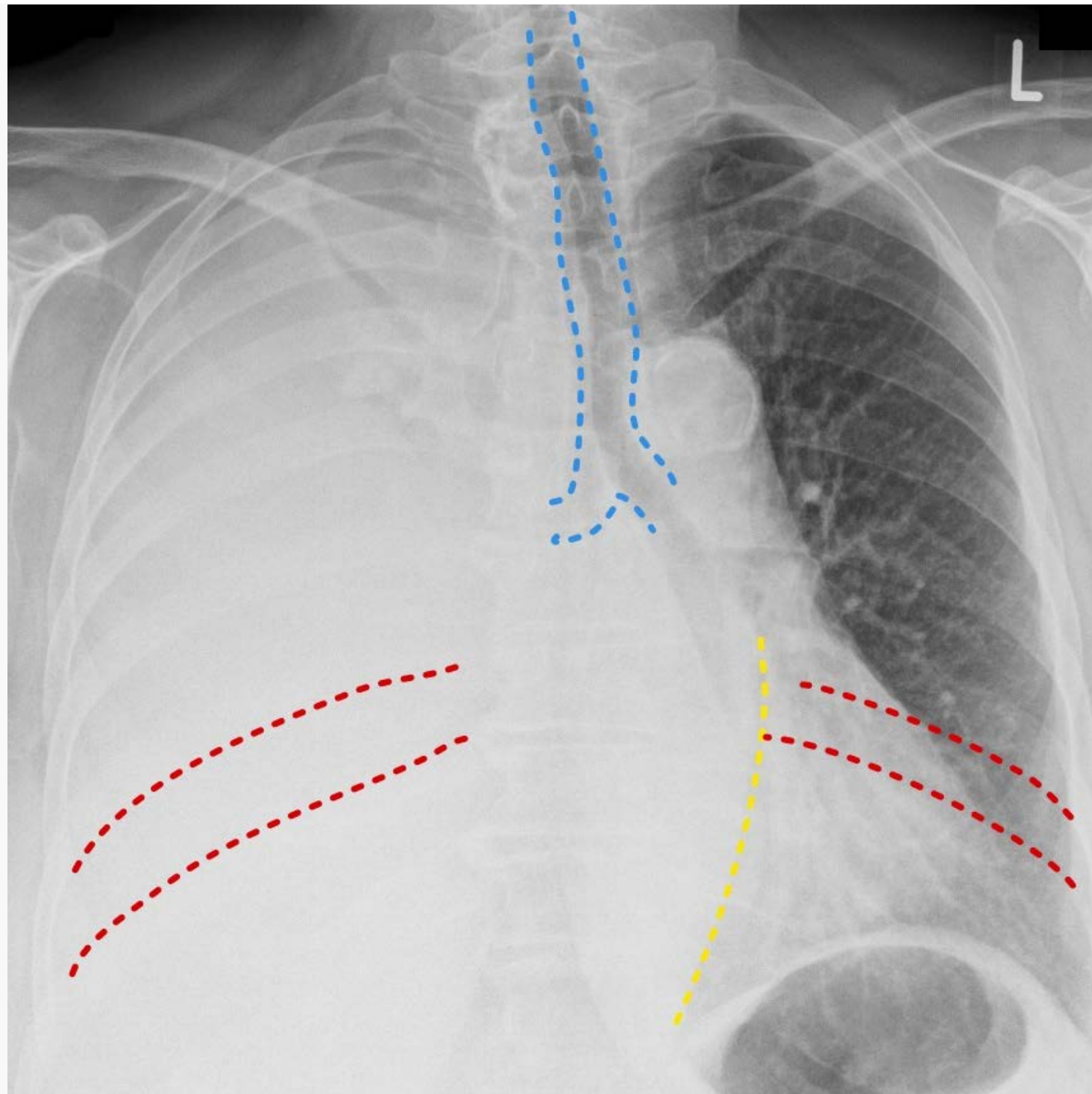
What is the main finding on the film?

	Right upper lobe consolidation
	Right sided pneumothorax
	Pulmonary oedema

	Right middle + lower lobe consolidation
	Bronchiectasis

Dashboard

Overall score: **0%**
1 -



□ Question 14 of 200



An 82-year-old gentleman with known chronic obstructive airways disease (COPD) is about to be discharged from hospital after being admitted with an infective exacerbation. He is now off antibiotics and has just completed a seven-day course of prednisolone. He remains hypoxic on room air S_{aO_2} 91%.

Bloods show:

Hb	134 g/l
Platelets	$350 \times 10^9/l$
WBC	$10.2 \times 10^9/l$

Arterial blood gas analysis shows:

P_{aO_2}	7.8 kPa
P_{aCO_2}	6.5 kPa
HCO_3^-	30 mmol/L

The patient's wife asked about having oxygen at home. What other investigations are needed to assess whether this patient would benefit from long-term oxygen therapy?

	Oxygen saturations before and after exercise
	Pulmonary function tests
	Computed tomography (CT) of the chest
	Chest x-ray
	Echocardiogram

Dashboard

Overall score: **0%**

1 -

□ Question 14 of 200



An 82-year-old gentleman with known chronic obstructive airways disease (COPD) is about to be discharged from hospital after being admitted with an infective exacerbation. He is now off antibiotics and has just completed a seven-day course of prednisolone. He remains hypoxic on room air S_{aO_2} 91%.

Bloods show:

Hb	134 g/l
Platelets	$350 \times 10^9/l$
WBC	$10.2 \times 10^9/l$

Arterial blood gas analysis shows:

P_{aO_2}	7.8 kPa
P_{aCO_2}	6.5 kPa
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	Computed tomography (CT) of the chest
	Chest x-ray
	Echocardiogram

Dashboard

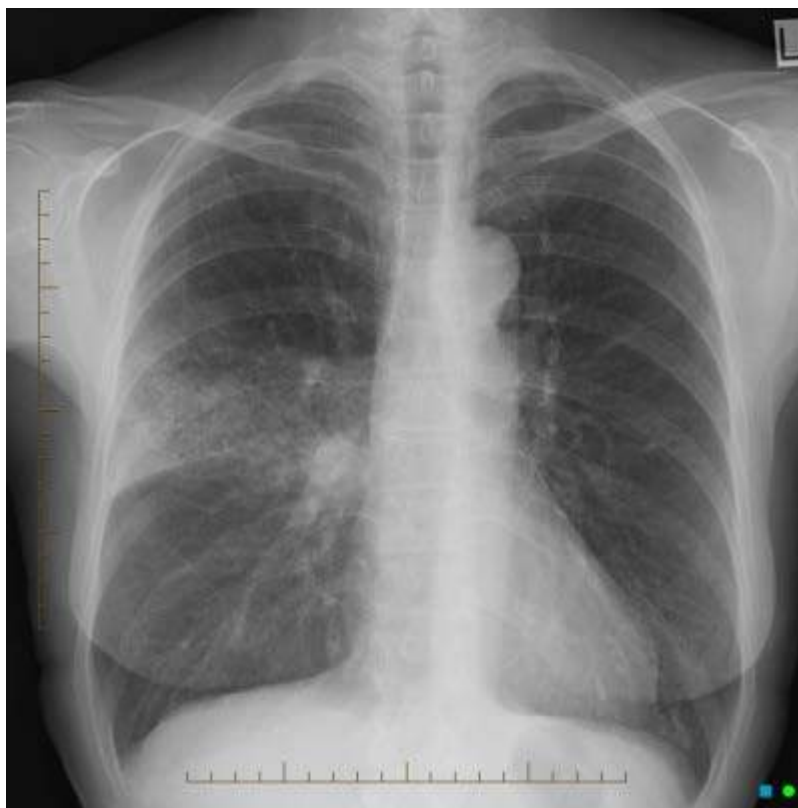
Overall score: **0%**

1 -

Question 15 of 200

□ □

A 71-year-old woman is admitted with shortness-of-breath to the acute medical unit. Her carers report that she has been feverish and confused for the past two days:



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What is the main finding on the film?

	Bronchiectasis
	Right middle lobe consolidation

	Tuberculosis
	Pulmonary abscess
	Right upper lobe consolidation

Dashboard

Overall score: 0%

1 -

□ Question 15 of 200

□ □

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Dashboard

Overall score: **0%**
1 -

Question 15 of 200

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© Image used on license from Radiopaedia

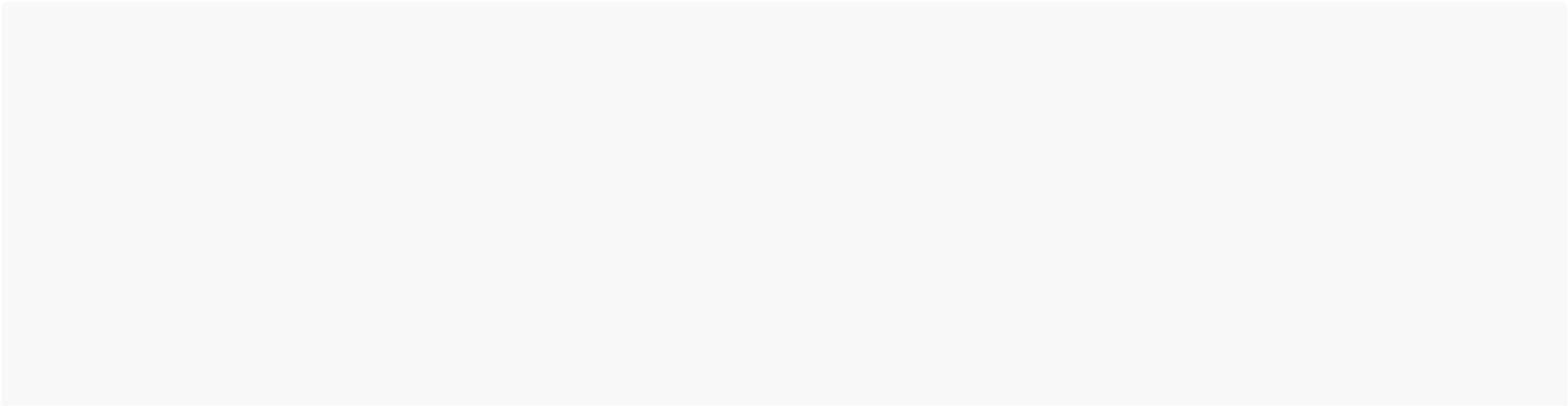
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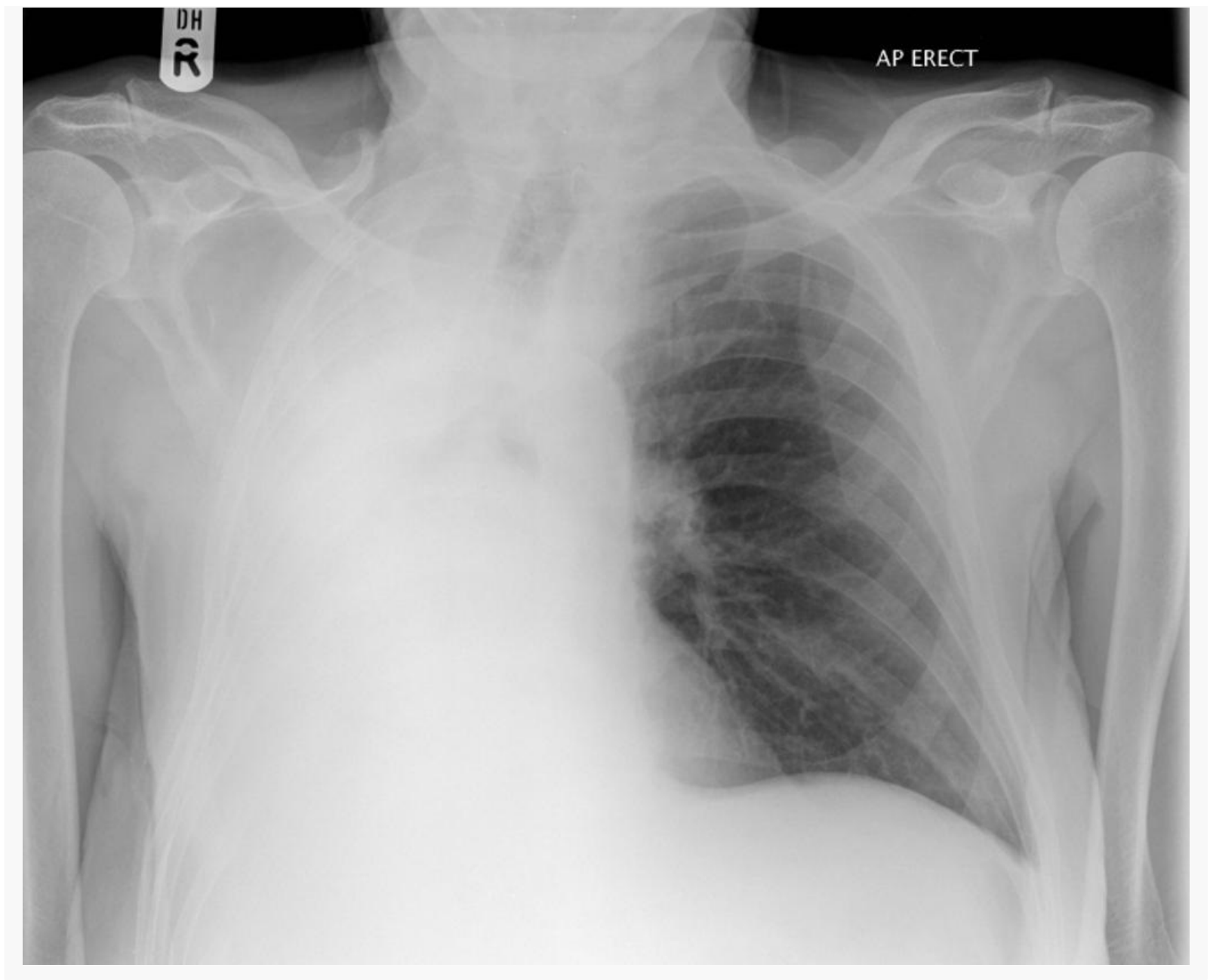
	Bronchiectasis
	Right middle lobe consolidation

	Tuberculosis
	Pulmonary abscess
	Right upper lobe consolidation

Dashboard

Overall score: **0%**
1 -

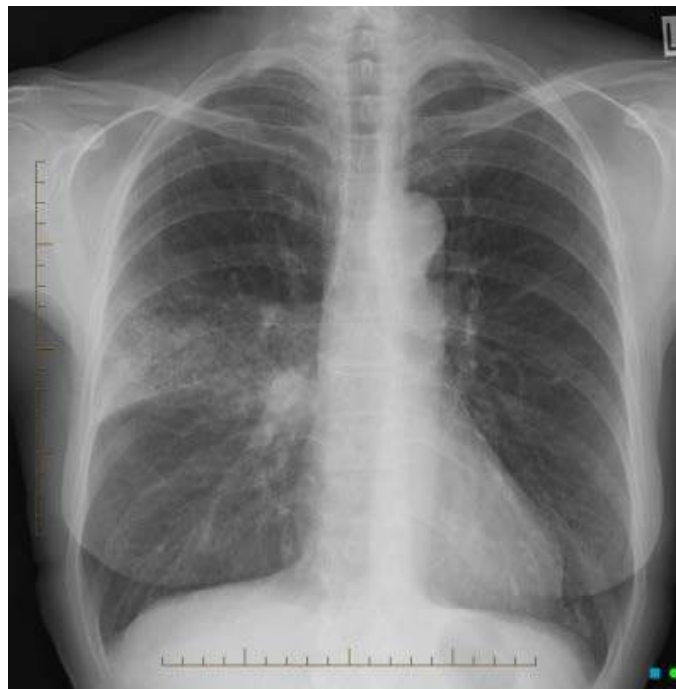




□ Question 15 of 200

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© Image used on license from Radiopaedia



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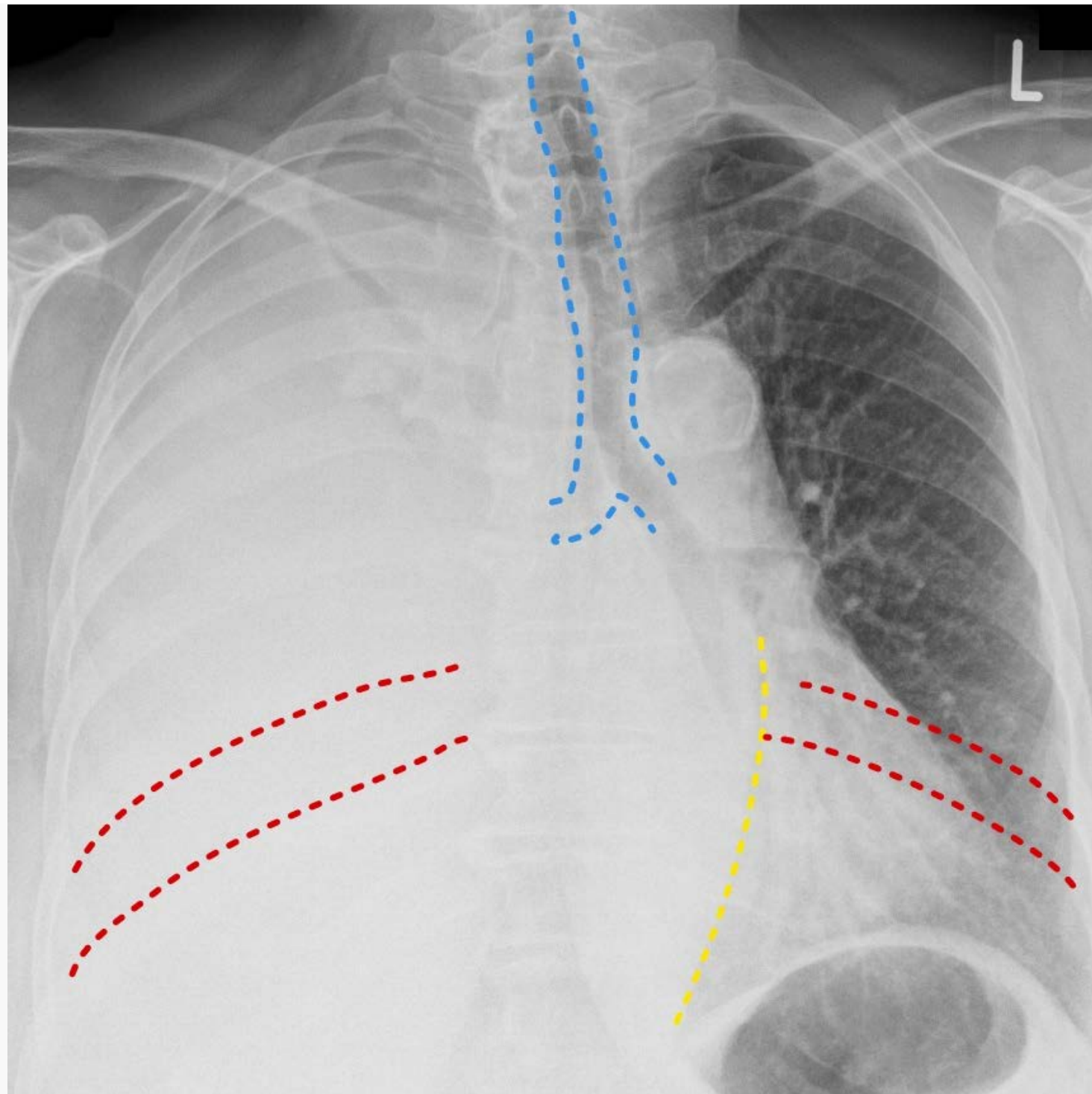
Right middle lobe consolidation

	Tuberculosis
	Pulmonary abscess
	Right upper lobe consolidation

Dashboard

Overall score: 0%

1 -



Question 16 of 200

□ □

A 66 year old gentleman, who is a known heavy smoker, presents with a non infective exacerbation of chronic obstructive pulmonary disease (COPD). Upon admission despite maximal medical therapy his blood gasses worsen and he is commenced on non invasive ventilation and transferred to the high dependency unit. The nurses call you in the middle of the night to come and urgently review the patient. They have been titrating up the patient's non invasive ventilation (NIV) as they felt his blood gasses were not improving on standard settings. On arrival the patient is diaphoretic and complaining of chest pain. He is unable to tolerate his face mask. Observations are recorded as a pulse of 110/min regular, respiratory rate 32/min, Sats 75% on air, Blood pressure 100/82 mmHg. What is the most likely cause for this patient's acute deterioration?

	Ventilator associated pneumonia
	Acute myocardial infarction
	Ventilator associated pneumothorax
	Worsening of his COPD
	Panic attack

Dashboard

Overall score: 0%

1 -

Question 16 of 200

□ □

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	Acute myocardial infarction
	Ventilator associated pneumothorax
	Worsening of his COPD
	Panic attack

Dashboard

Overall score: **0%**

1 -

Question 17 of 200

□ □

A 61 year old gentleman is reviewed in the respiratory clinic. He has a diagnosis of chronic obstructive pulmonary disease and a history of smoking which he discontinued five years prior, although not before amassing a forty pack year history. He relates four emergency admissions to hospital in the past year with exacerbations of his lung disease and is currently breathless enough to reduce his exercise tolerance by a half. He is mildly wheezy on auscultation but there is no overt clinical infection. His respiratory rate is 22 and his oxygen saturations are 93% on air. Spirometry reveals a forced expiratory volume in one second (FEV1) of 35% predicted. He is currently taking inhaled salbutamol as required and once daily inhaled tiotropium.

Which of the following is the most appropriate pharmacological management for this patient?

	Substitution of salbutamol with a long acting beta agonist (LABA)
	Addition of a long acting muscarinic antagonist (LAMA)
	Addition of combination long acting beta agonist and long acting muscarinic antagonist (LABA/LAMA)
	Addition of combination long acting beta agonist and inhaled corticosteroid (LABA/ICS)
	Addition of inhaled corticosteroid therapy (ICS)

Dashboard

Overall score: 0%

1 -

Question 17 of 200

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Dashboard

Overall score: **0%**

1 -

□ Question 18 of 200

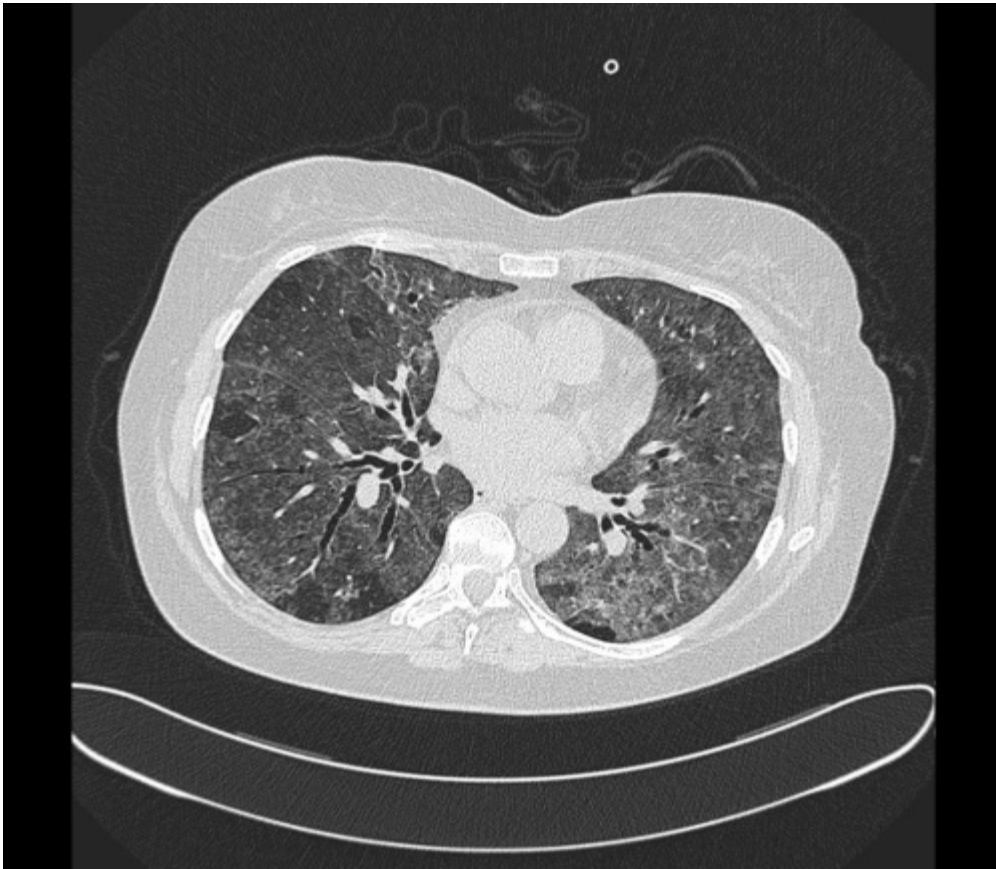
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A 60-year-old woman is investigated for recurrent episodes of dyspnoea. She describes becoming progressively more short-of-breath over the past two years with frequent exacerbations associated with fever, lethargy and coughing bouts. Her symptoms often settle down for a time but she does feel her breathing is getting worse over time.

She smokes 20 cigarettes/day, drinks 10 units of alcohol per week and works in a poultry farm. Her past medical history includes hypothyroidism and depression.

On examination her oxygen saturations on air are 94%.

A CT scan is requested:



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What is the most likely diagnosis?

	Bronchiectasis
	Hypersensitivity pneumonitis
	Sarcoidosis
	Histiocytosis
	Histoplasmosis

Dashboard

Overall score: 0%

1 -

□ Question 18 of 200

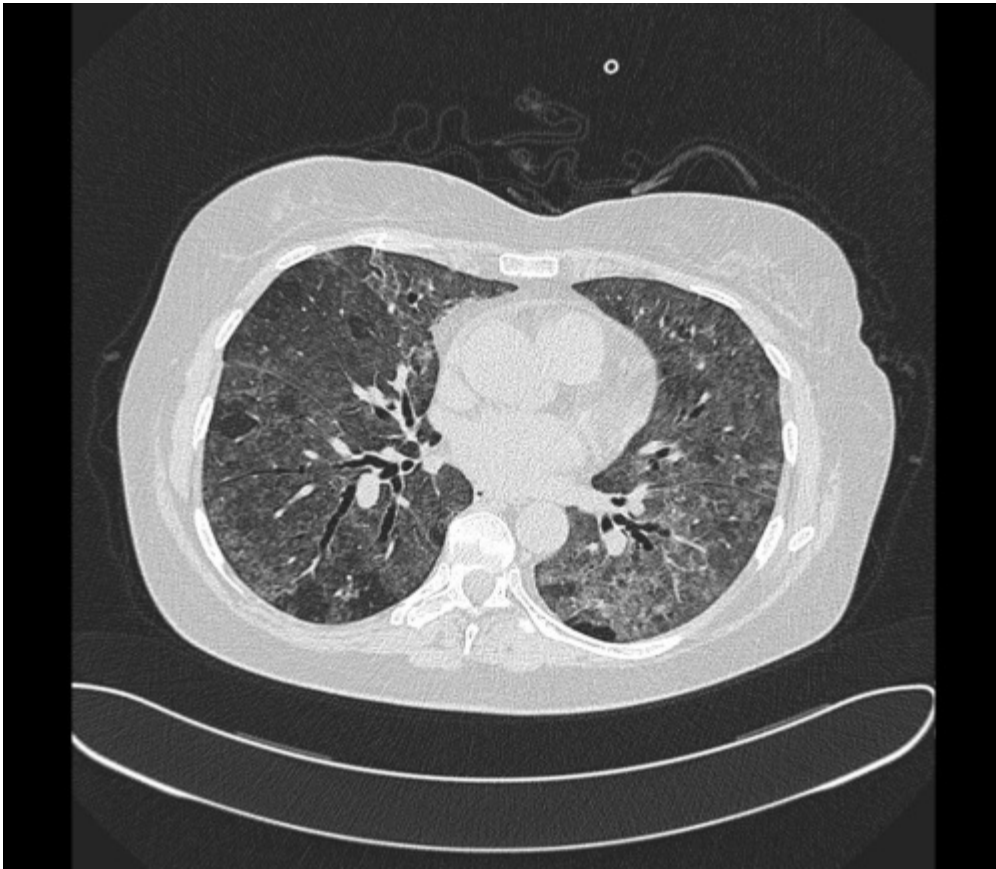
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	Sarcoidosis
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Dashboard

Overall score: **0%**

1 -

□ Question 18 of 200

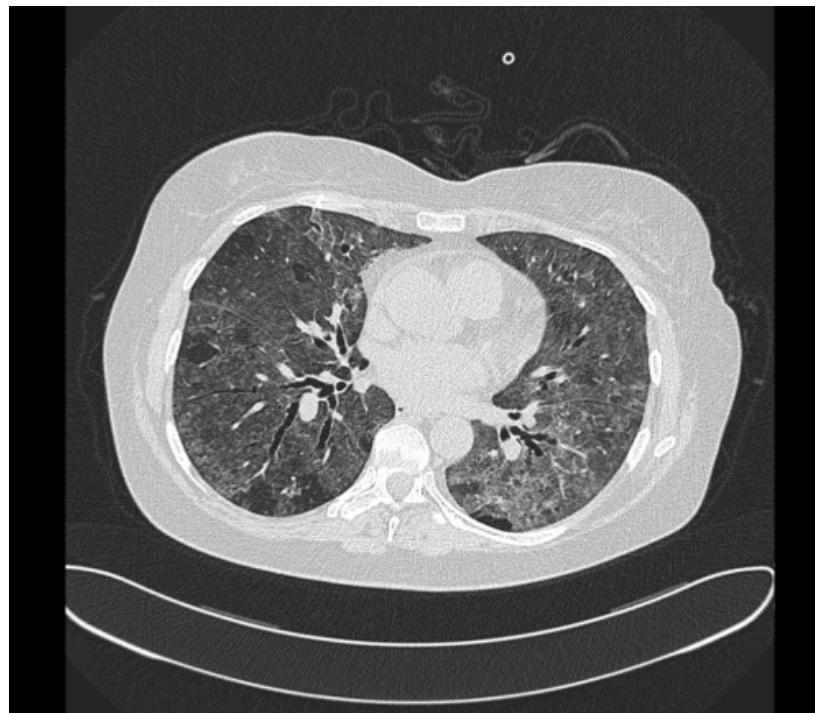
□ □

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Dashboard

Overall score: **0%**

1 -



□ Question 18 of 200

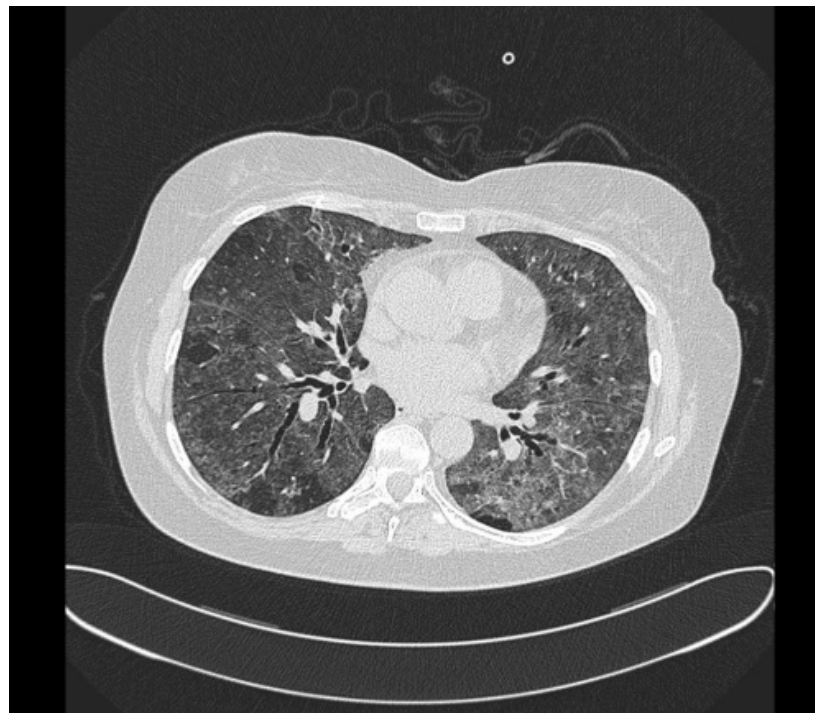
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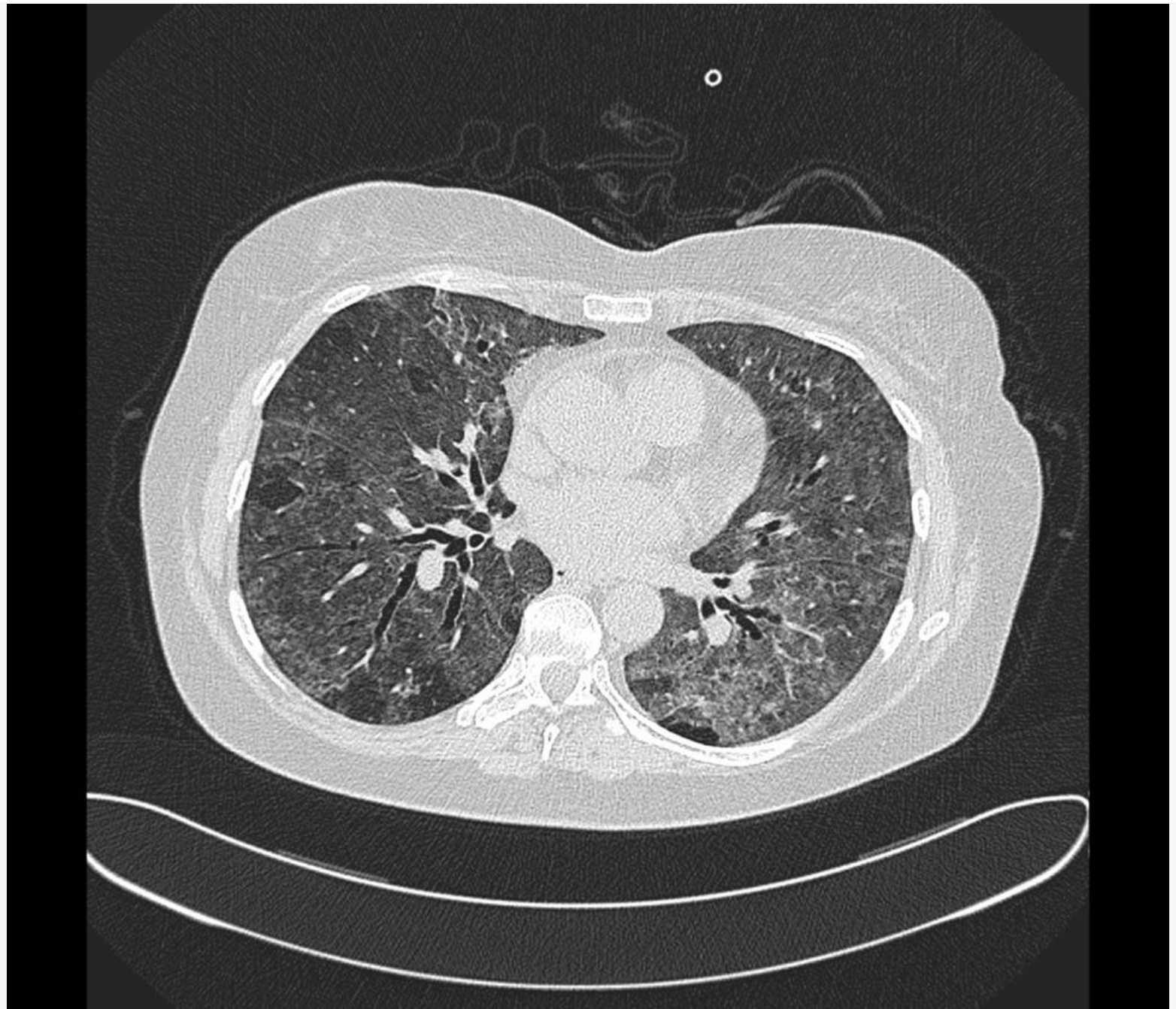
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	Hypersensitivity pneumonitis
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Dashboard

Overall score: **0%**

1 -

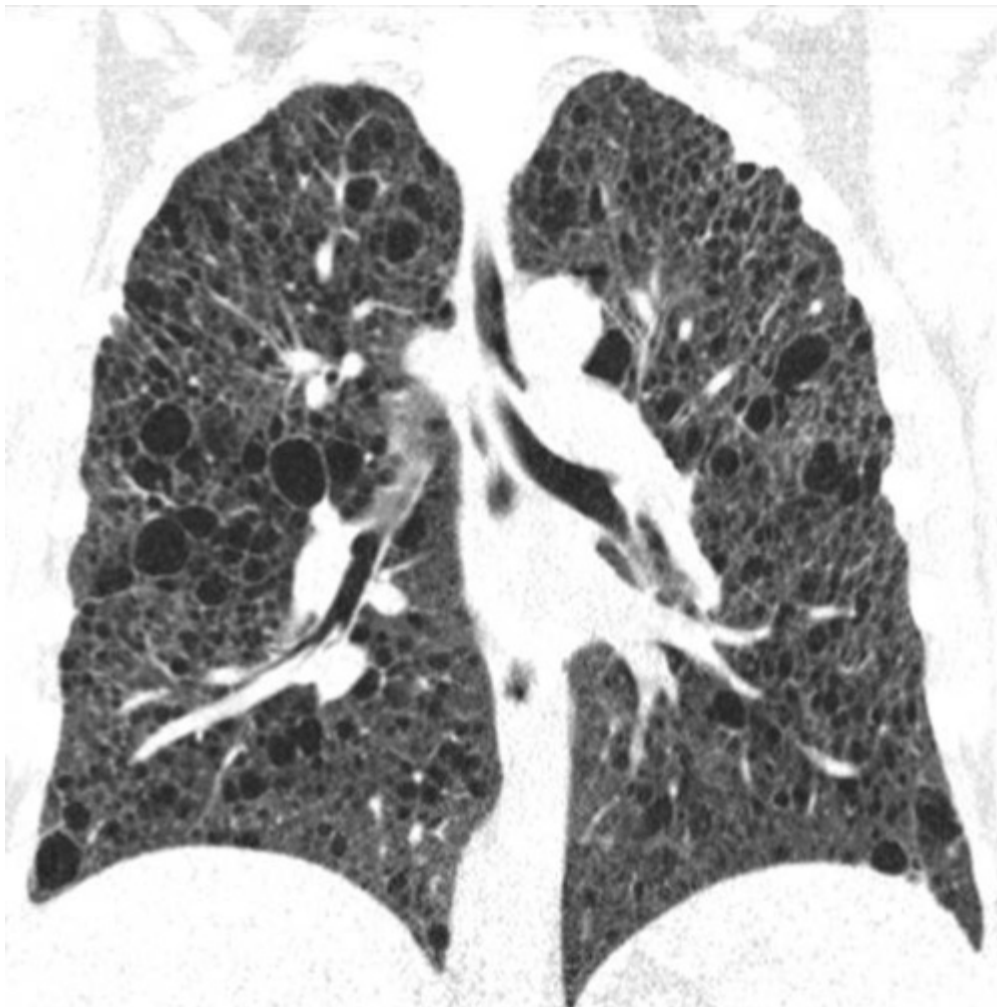


□ Question 19 of 200

□ □

A 39-year-old woman with known tuberous sclerosis is referred to the respiratory clinic after developing progressive dyspnoea. Her GP had requested a chest x-ray which showed significant changes.

The CT scan is shown below:



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What complication has developed?

	Metastatic angiomyolipoma
	Lymphangioleiomyomatosis
	Lung rhabdomyomas
	Lung angiofibromas
	Subependymal giant cell astrocytoma

Dashboard

Overall score: 0%

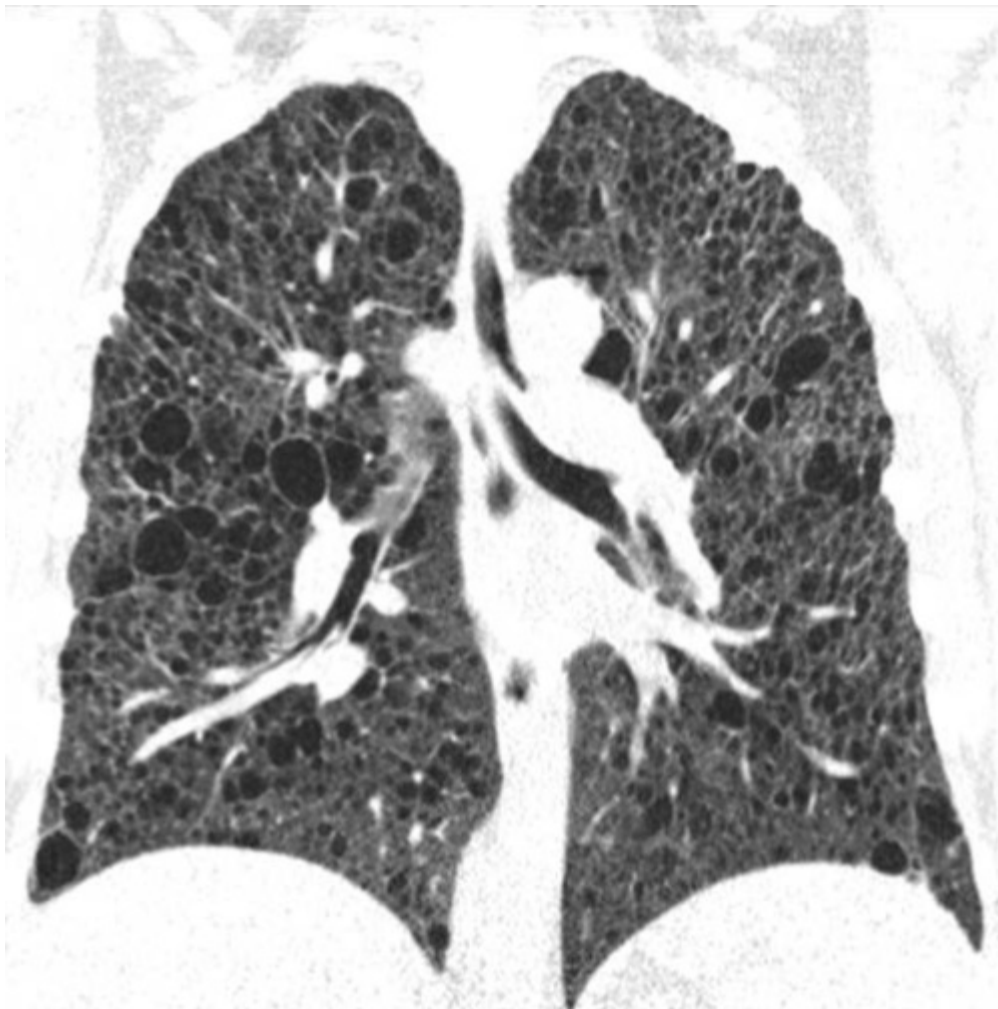
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□ Question 19 of 200

□ □

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	Lung angiofibromas
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Dashboard

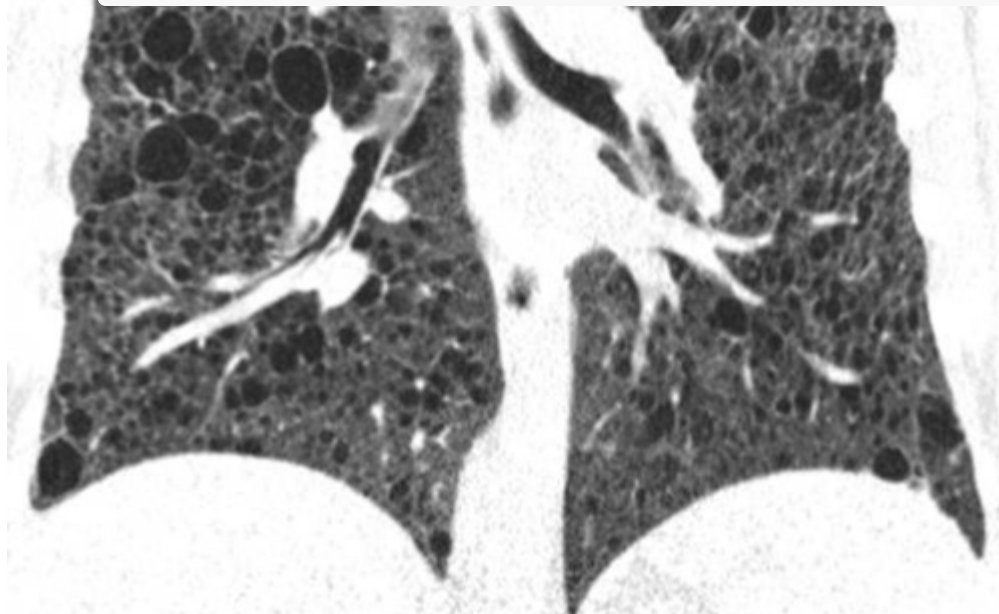
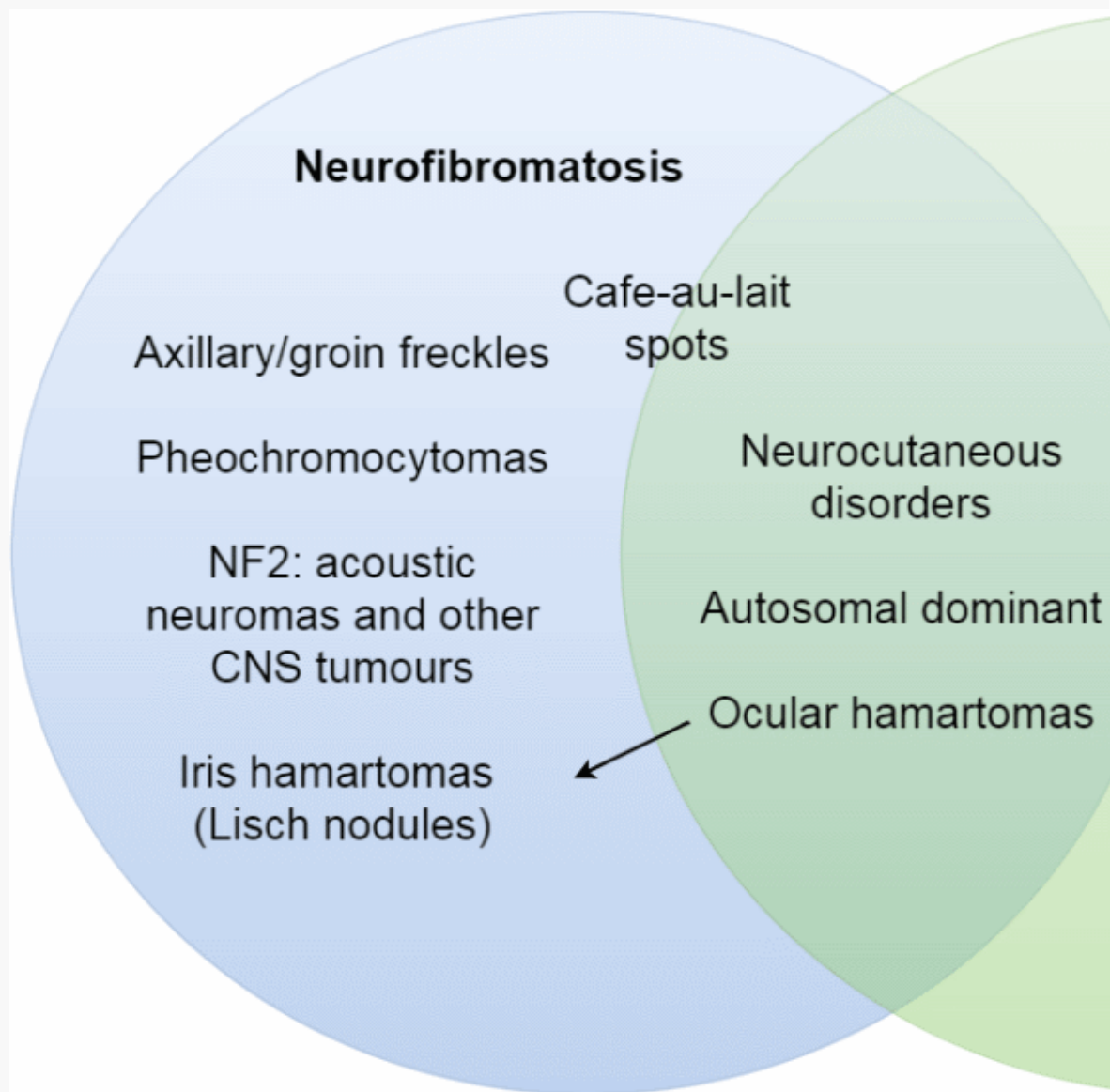
Overall score: 0%

1 -

Question 19 of 200

A 39-year-old woman with long-standing asthma and chronic dyspnoea. Her GP had requested a CT scan of the chest.

The CT scan is shown below.



What complication has developed?

	Metastatic angiomyolipoma
	Lymphangi leiomyomatosis
	Lung rhabdomyomas
	Lung angiofibromas
	Subependymal giant cell astrocytoma

Dashboard

Overall score: 0%

1 -

Question 20 of 200

□ □

A 25-year-old smoker presents to the Emergency Department with a 3-day history of pleuritic chest pain and mild exertional dyspnoea. A chest radiograph confirms a left sided pneumothorax that measures 3 cm at the hilum. What would be the correct course of action?

	Insert Seldinger chest drain
	Aspirate with cannula up to 2.5L and repeat chest X-Ray
	Discharge with follow up in 2-4 weeks
	Admit for 24 hours observation with conservative treatment
	Discharge without follow up

Dashboard

Overall score: 0%

1 -

□ Question 20 of 200

□ □

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Dashboard

Overall score: **0%****1** -

Question 21 of 200

□ □

A 68-year-old is seen in a cardiology clinic. He has a part history of long-standing atrial fibrillation, hypertension and ischaemic heart disease. He describes progressive shortness of breath over the past year and a dry cough. His medication history includes aspirin, amiodarone, ramipril, doxazosin and gliclazide.

On examination, he is comfortable on lying flat but is noticeably dyspnoeic when mobilising. He has minimal ankle oedema, his heart rate is 78 beats per minute and he has fine bibasal crepitations on auscultation of his chest. His oxygen saturations on air are 92%.

An echocardiogram reveals a left ventricular ejection fraction of 45%, a mildly hypertrophied left ventricle and well established right ventricular hypertrophy, pulmonary artery pressures are raised at 32 mmHg (normal: < 25 mmHg). A chest x-ray shows non-specific changes on both bases.

What is the most appropriate next investigation?

	Exercise stress test
	Cardiac MRI
	Overnight oximetry
	Repeat echo
	HRCT chest

Dashboard

Overall score: 0%

1 -

Question 21 of 200

□ □

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	Exercise stress test
	Cardiac MRI
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	Repeat echo
	HRCT chest

Dashboard

Overall score: **0%**

1 -

□ Question 21 of 200

□ □

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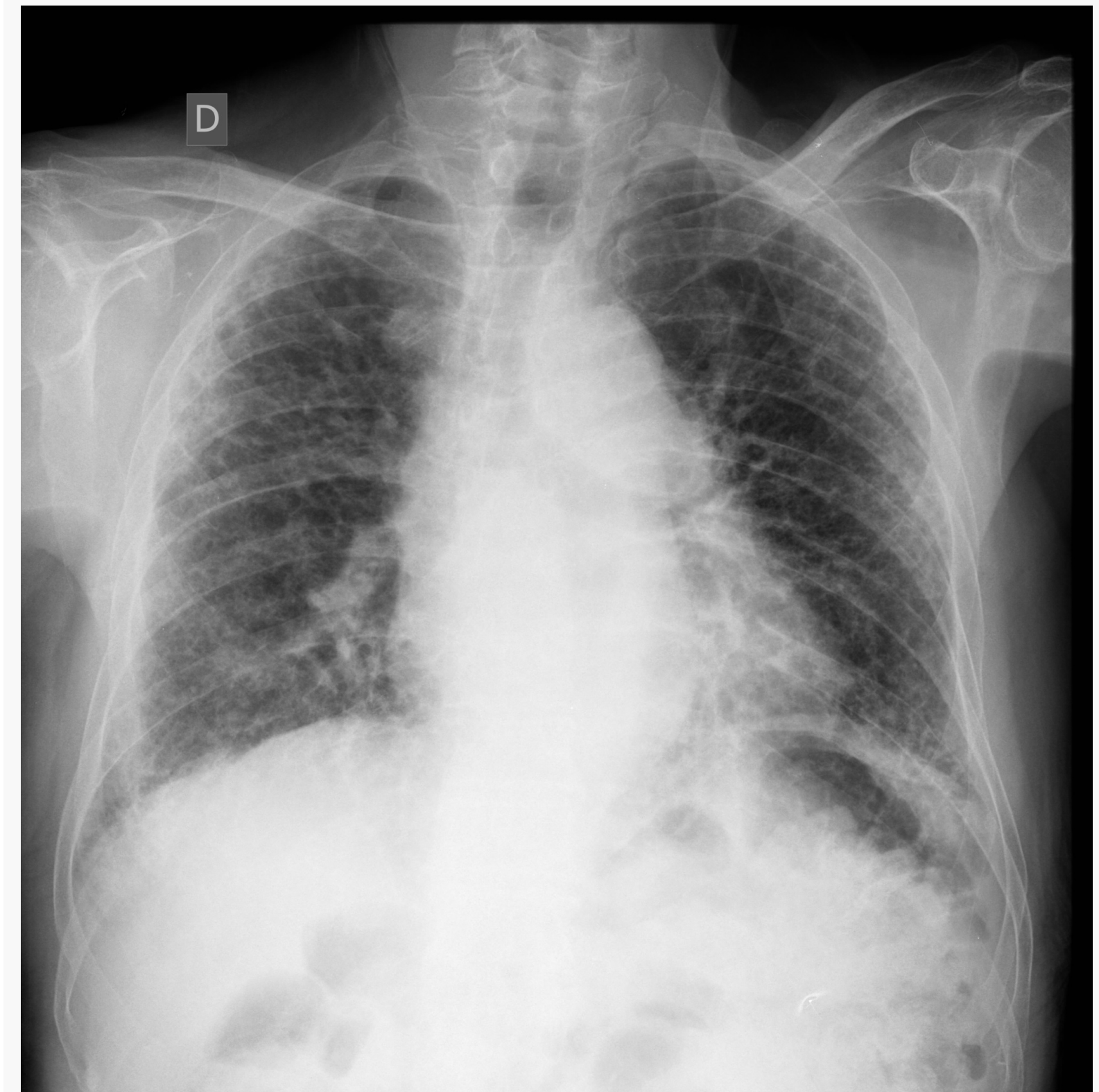
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	Cardiac MRI
	Overnight oximetry
	Repeat echo
	HRCT chest

Dashboard

Overall score: 0%

1 -





□ Question 21 of 200

□ □

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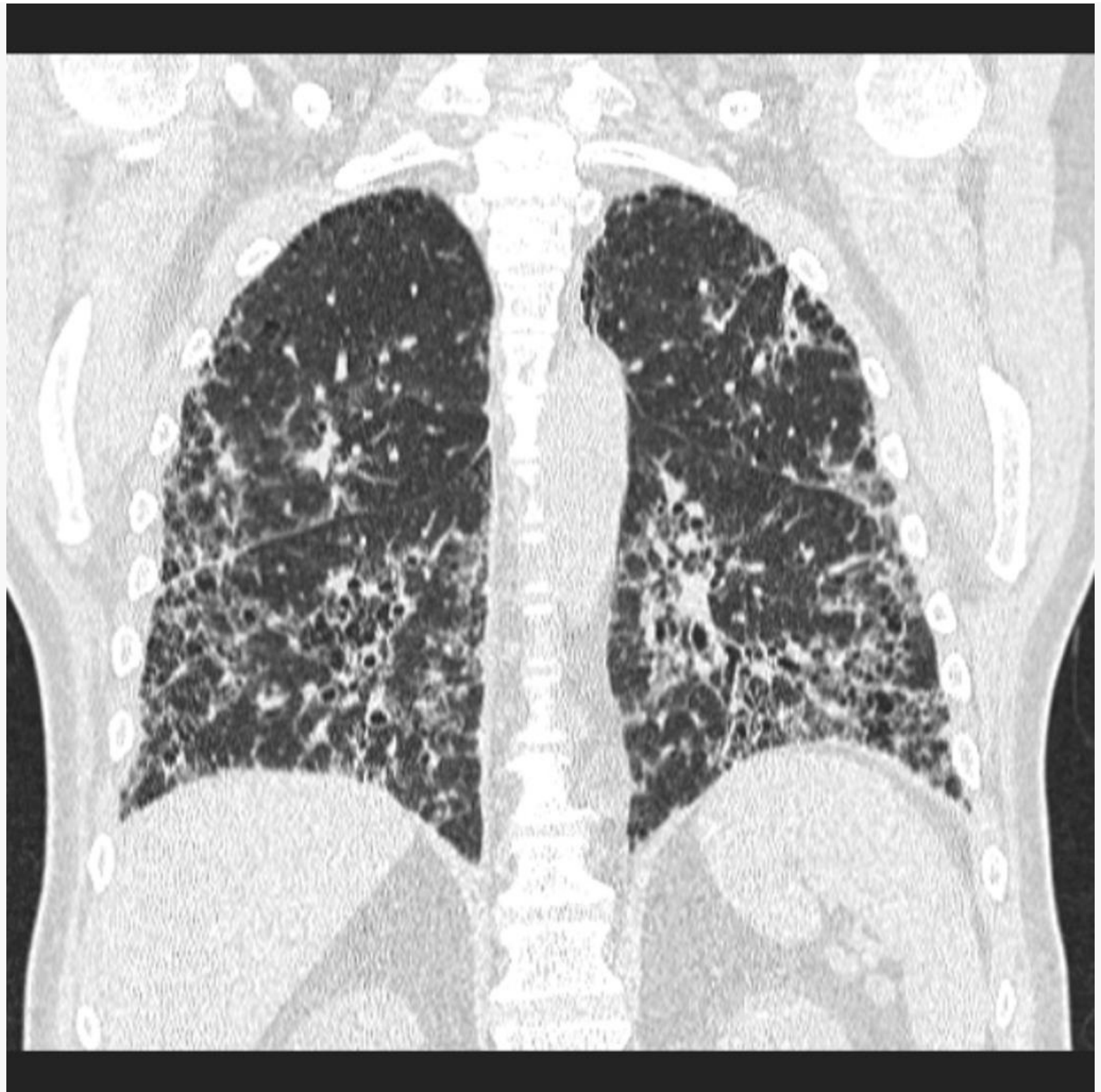
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	Exercise stress test
	Cardiac MRI
	Overnight oximetry
	Repeat echo
	HRCT chest

Dashboard

Overall score: 0%

1 -



Question 21 of 200

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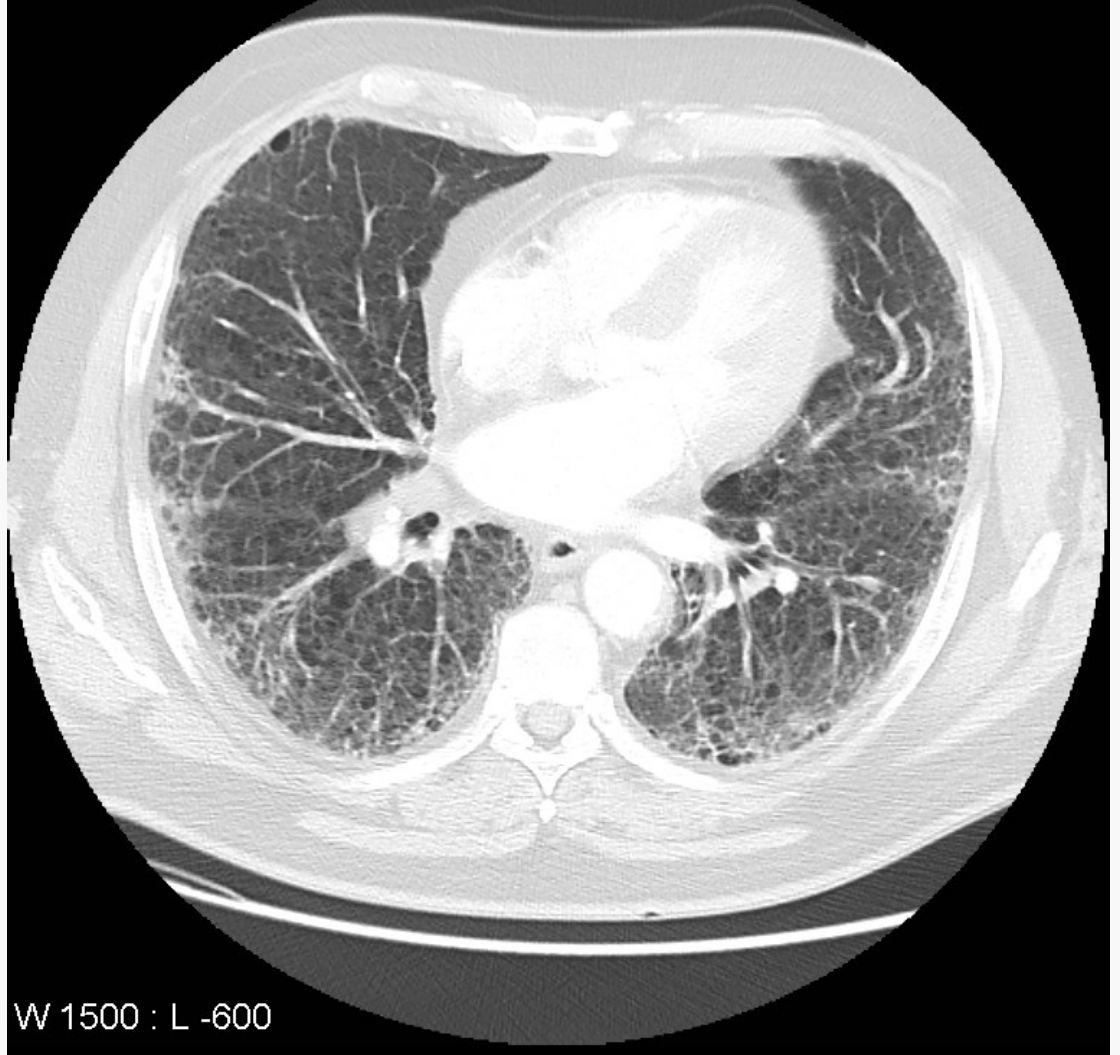
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What is the most appropriate next investigation?

	Exercise stress test
	Cardiac MRI
	Overnight oximetry
	Repeat echo
	HRCT chest

Dashboard

Overall score: 0%
1 -



Question 22 of 200

□ □

A 76-year-old man presented with vague lower abdominal pain. He was known to have underlying type 2 diabetes mellitus, hypertension and severe chronic obstructive pulmonary disease (COPD). He was a smoker with 50 pack years smoking history.

A CT abdomen was taken which showed diverticular disease of the colon. Incidentally it also showed a 2.5 cm mass in the periphery of the lower lobe of the left lung. Subsequently he underwent a positron emission tomography (PET) scan which showed the lung lesion with standardised uptake value (SUV) of 12.5 which was highly suspicious of cancer. There was no evidence of spread to lymph nodes or distant sites. A CT guided biopsy of the lung lesion was done which showed squamous cell carcinoma. His performance status was 2 in Eastern Cooperative Oncology Group (ECOG) scale. His lung functions showed an FEV1 of 0.8L (25% predicted) and FVC of 1.3L (30% predicted). TLCO was 30% predicted.

Which of the following is a suitable choice of treatment for him?

	Lobectomy
	Chemotherapy
	Radical radiotherapy
	Lobectomy+chemotherapy
	Best supportive care

Dashboard

Overall score: 0%

1 -

□ Question 22 of 200

□ □

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Which of the following is a suitable choice of treatment for him?

	Lobectomy
	Chemotherapy
	Radical radiotherapy
	Lobectomy+chemotherapy
	Best supportive care

Dashboard

Overall score: 0%

1 -

Question 23 of 200

□ □

A 54-year-old woman presents to the emergency department with shortness of breath. She has slight associated pleuritic chest pain, but no cough and denies coughing up any blood and denies feeling hot or cold. Her symptoms started four hours ago and came on suddenly whilst at rest. She was well prior to today.

She has a past medical history of hypothyroidism and underwent a wide local excision for ductal carcinoma in situ one year ago. Her observations are all within normal range except for oxygen saturations which are at 93%. She has never smoked. Chest examination reveals few scattered crepitations heard over the right lower zone. Blood tests, including a D-dimer, are pending. What is the most appropriate next step?

	Warfarin
	Chest X-ray
	CT pulmonary angiogram
	Ventilation-Perfusion scan
	Treatment dose low molecular weight heparin

Dashboard

Overall score: 0%

1 -

Question 23 of 200



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Dashboard

Overall score: 0%

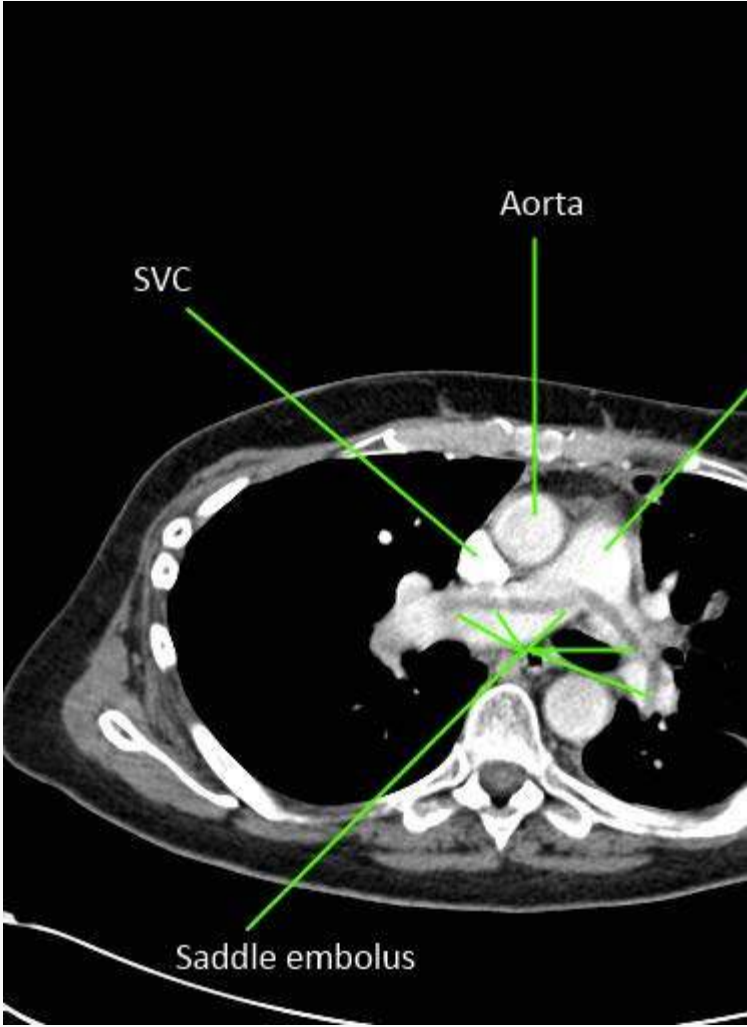
1 -

Question 23 of 200

A 54-year-old woman presents to the emergency department with chest pain, but no cough and denies coughing up any blood a few hours ago and came on suddenly whilst at rest. She was well

She has a past medical history of hypothyroidism and underwent thyroidectomy a year ago. Her observations are all within normal range except tachycardia. She smoked. Chest examination reveals few scattered crepitations. D-dimer, are pending. What is the most appropriate next step?

Warfarin
Chest X-ray
CT pulmonary angiogram
Ventilation-Perfusion scan
Treatment dose low molecular weight heparin



Dashboard

Overall score: 0%

1 -

□ Question 23 of 200

□ □

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	Ventilation-Perfusion scan
	Treatment dose low molecular weight heparin

Dashboard

Overall score: 0%

1 -

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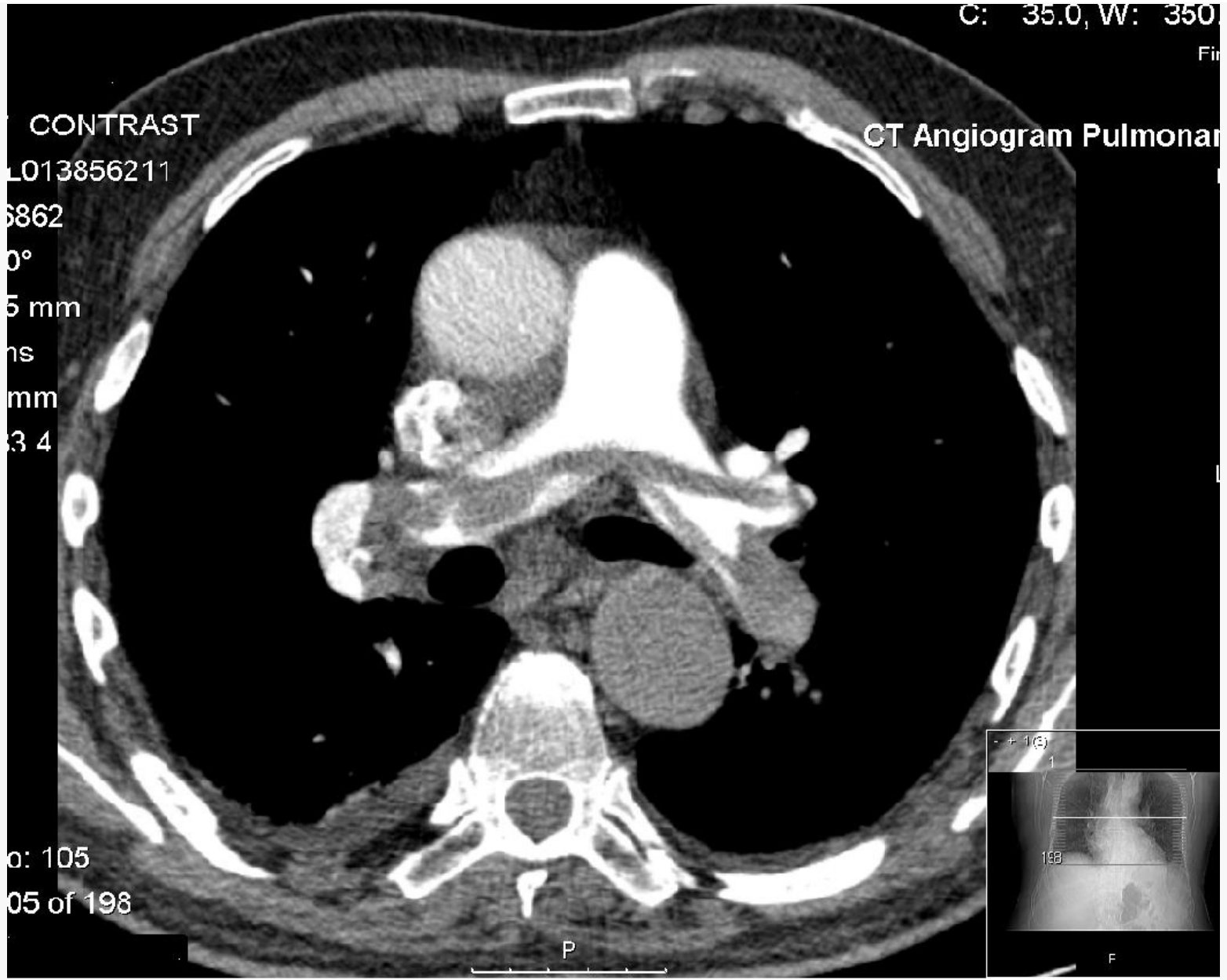
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□ Question 24 of 200

□ □

A 72-year-old gentleman presents for review in the medical clinic. He has had COPD for five years and is on regular bronchodilator treatment with a combination budesonide and formoterol fumarate inhaler and salbutamol inhaler as needed. He has found that he suffers from multiple chronic coughs and finds his exercise tolerance reduced. He has a past medical history of macular degeneration, osteoarthritis, mild memory impairment and diverticulosis. He has noticed that the distance he can walk has reduced from being able to go to the local shop, roughly one mile away, to having to stop at three-quarters the distance there. What would investigation result be most useful to help determine the severity of his COPD?

	FEV1/FVC
	Chest X-ray
	High resolution CT scan of the chest
	Partial pressure of oxygen on arterial blood gas
	FEV1% of predicted

Dashboard

Overall score: 0%

1 -

□ Question 24 of 200

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	FEV1/FVC
	Chest X-ray
	High resolution CT scan of the chest
	Partial pressure of oxygen on arterial blood gas
	FEV1% of predicted

Dashboard

Overall score: **0%****1** -

□ Question 25 of 200

□ □

A 62 year old woman is referred for a respiratory opinion after experiencing a 6 month history of increasing shortness of breath on exertion. Initially symptoms were mild but had progressed to the point where climbing a single flight of stairs leaves the patient requiring to sit and rest to catch her breath. There was no history of cough, chest pain or sputum production. Treatment with two courses of antibiotics prescribed by her GP had no effect on her symptoms. Past medical history included a hysterectomy at the age of 50 years and hypertension, treated with bendroflumethiazide for the past 12 months. The patient is a retired bank clerk and is a carer for her husband. She has never smoked and drinks around 15 units of alcohol per week.

Examination revealed no finger clubbing but persistent bi-basal crackles were present on auscultation of the lower zones. Cardiovascular examination demonstrated no elevation of jugular venous pressure, no right ventricular heave, normal heart sounds and no peripheral oedema. Painless swelling of the distal interphalangeal joints of the patient's right index and ring fingers was noted.

Details of initial investigations are given below.

Rheumatoid factor	Negative
Anti-nuclear antibodies	Negative
Erythrocytes sedimentation rate	65 mm / hr

Forced vital capacity	55 % predicted
Forced expiratory volume (1s)	52 % predicted
FVC / FEV1	97 % predicted
TLCO	45 % predicted
DLCO	47 % predicted

High resolution CT chest: sub-pleural reticular interstitial shadowing predominant in the lung bases

Transthoracic echocardiogram: normal systolic and diastolic function of both right and left ventricles; normal valvular function; normal pulmonary artery pressures

What treatment has been demonstrated to reduce the risk of disease progression in this patient?

	N-acetyl cysteine
	Co-trimoxazole
	Nintedanib
	Azathioprine
	Pirfenidone

Dashboard

Overall score: 0%

1 -

□ Question 25 of 200

□ □

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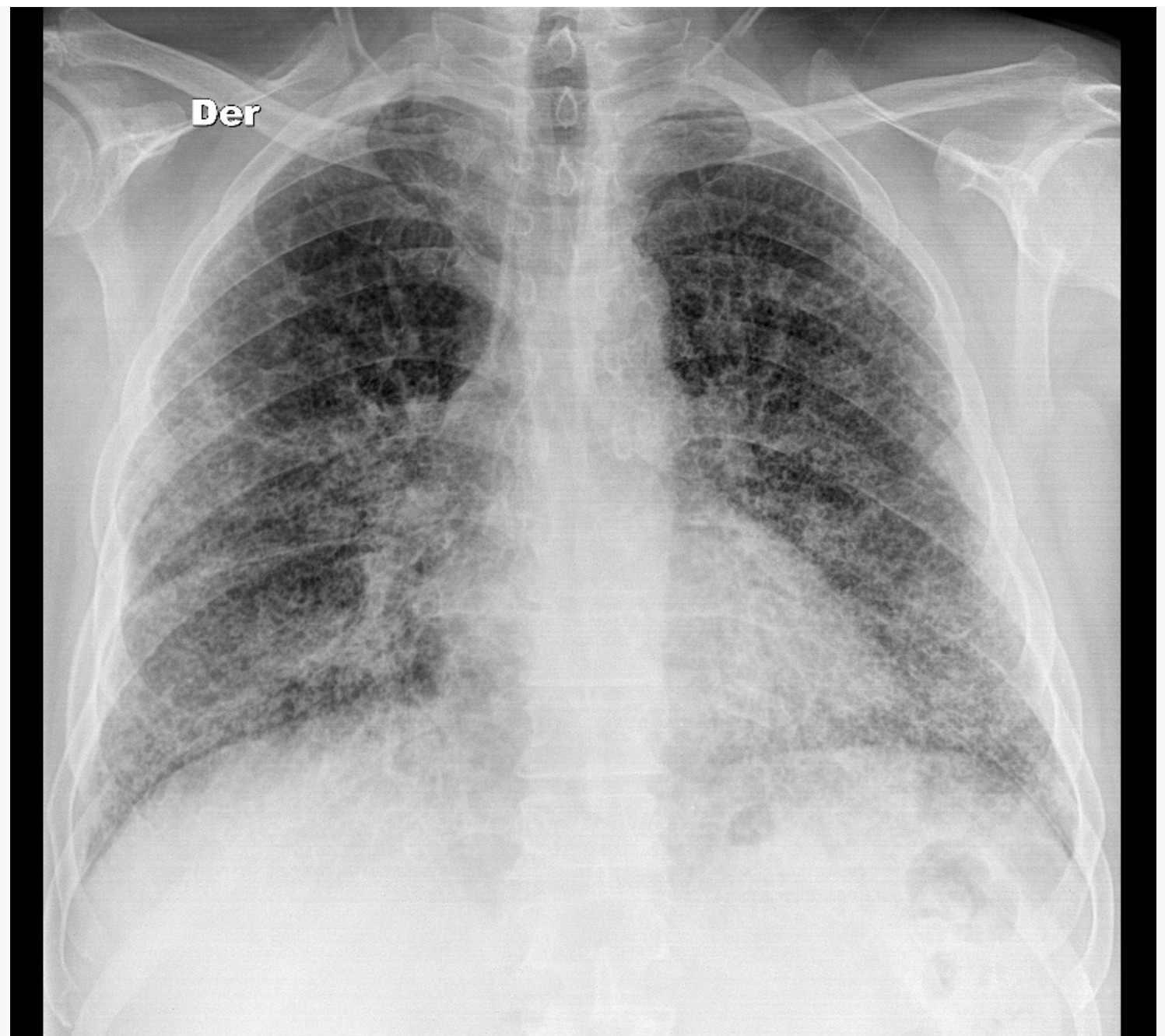
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□ Question 25 of 200

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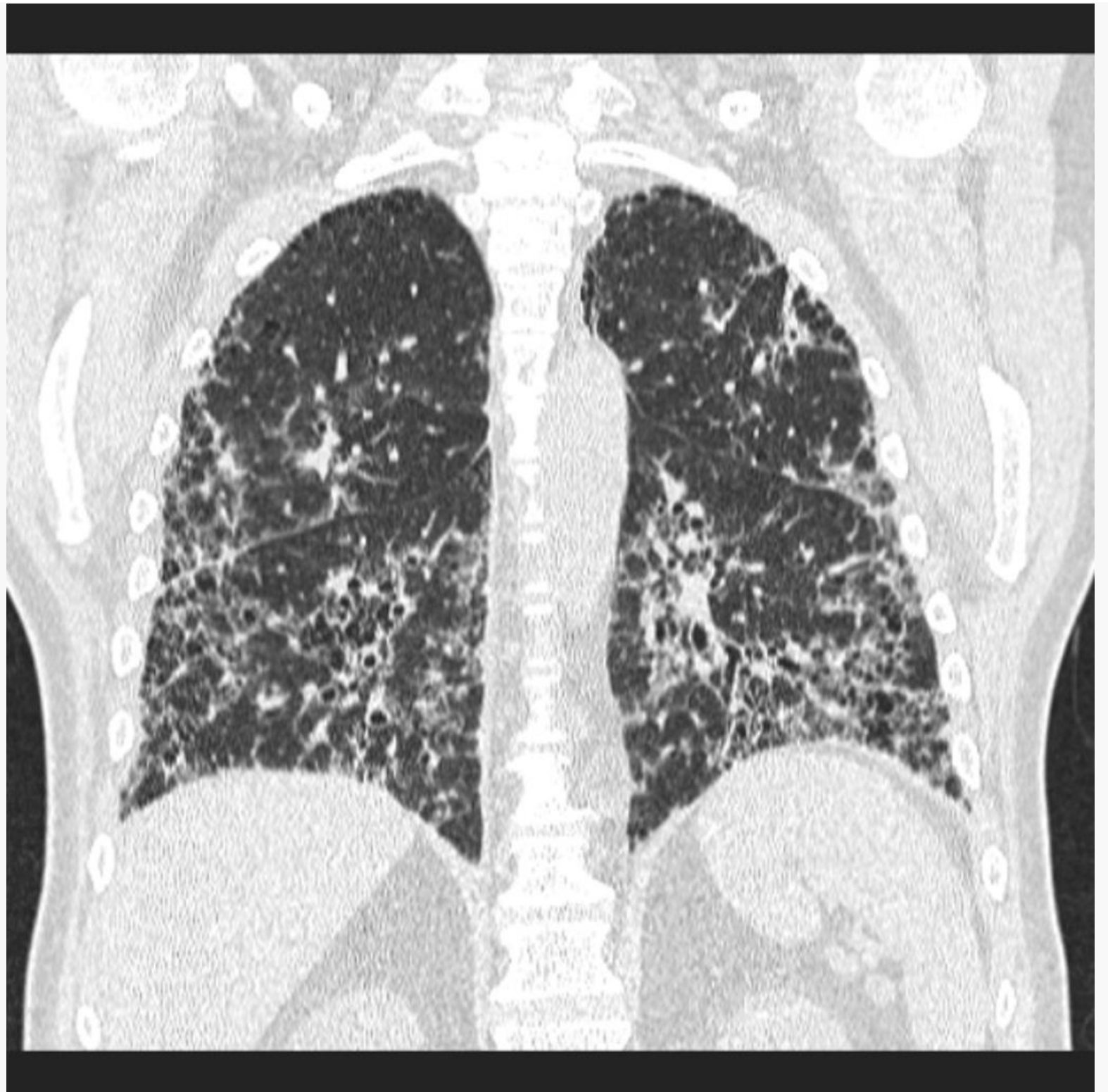
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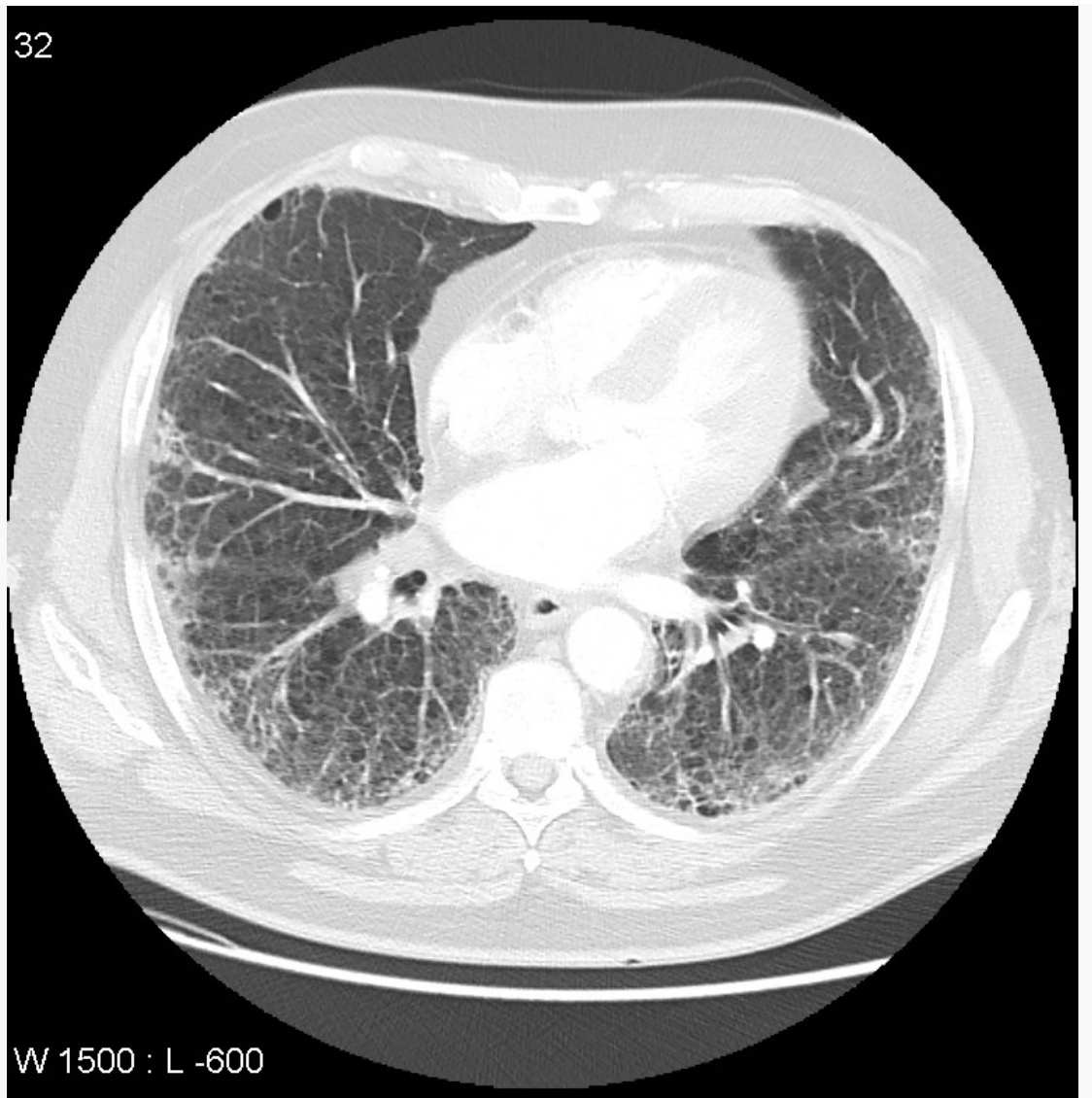
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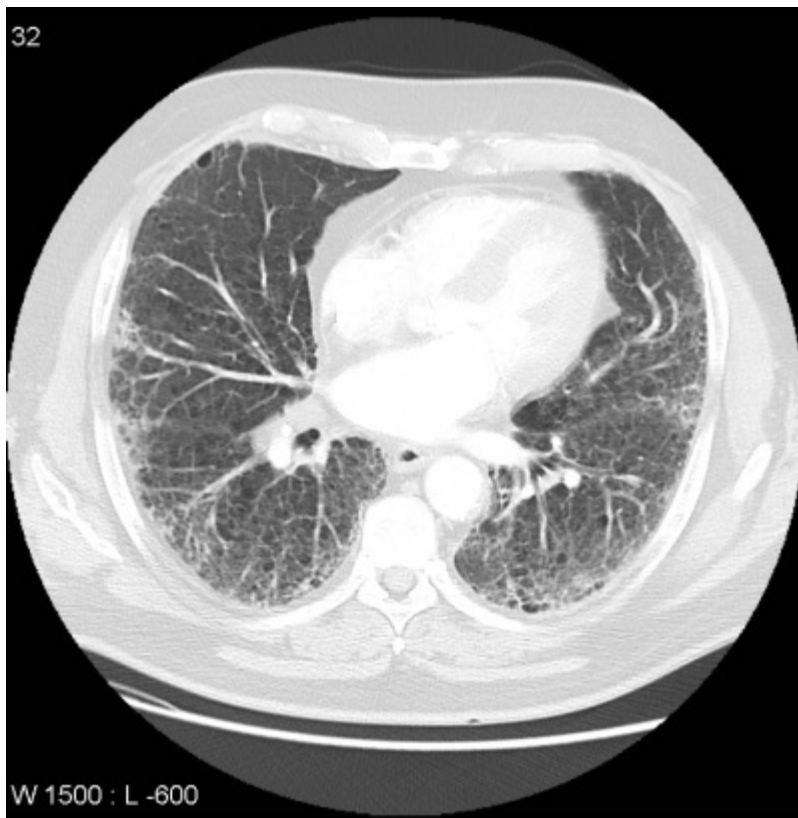
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□ Question 26 of 200

□ □

A 59-year-old man is investigated for dyspnoea. Over the past 12 months he has become more breathless on exertion and has been troubled by a cough. He stopped smoking 10 years ago but prior to this had a 30-pack-year history. There is no history of chest pain, fever, night sweats or asbestos exposure. A CT chest is requested and shown below:



© Image used on license from Radiopaedia



What does the CT scan show?

	Lung cancer
	Idiopathic pulmonary fibrosis

	Multiple pulmonary embolisms
	Bronchiectasis
	Emphysema

Dashboard

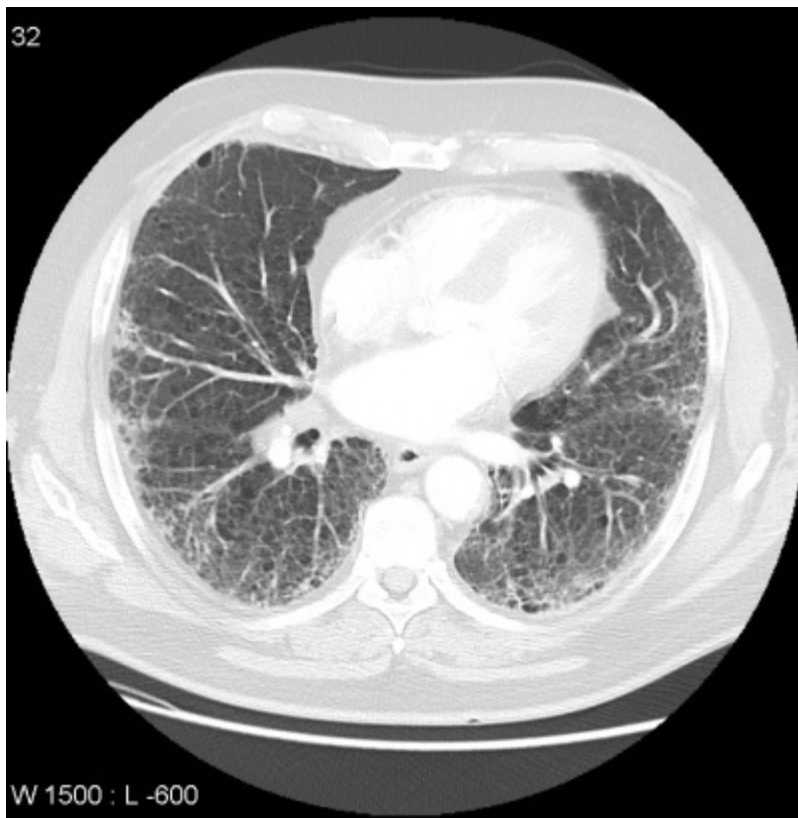
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1 -

Question 26 of 200



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1 -

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1 -

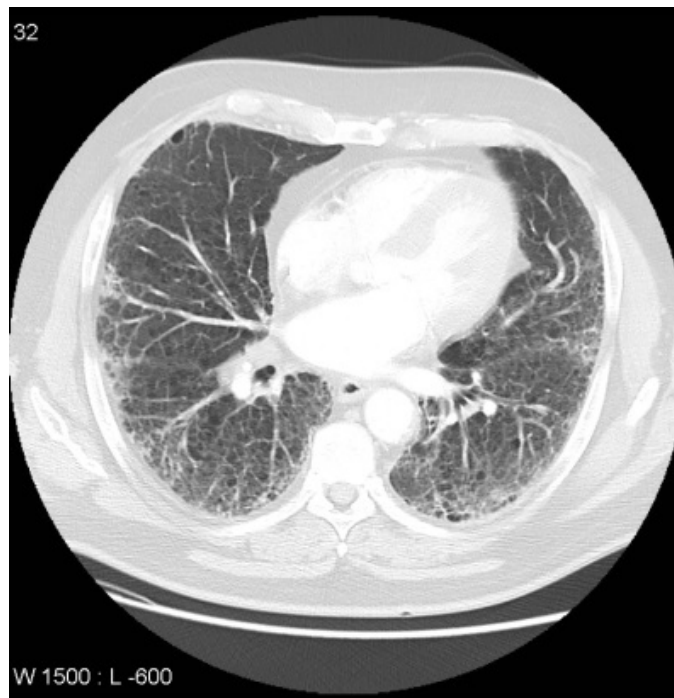




□ Question 26 of 200

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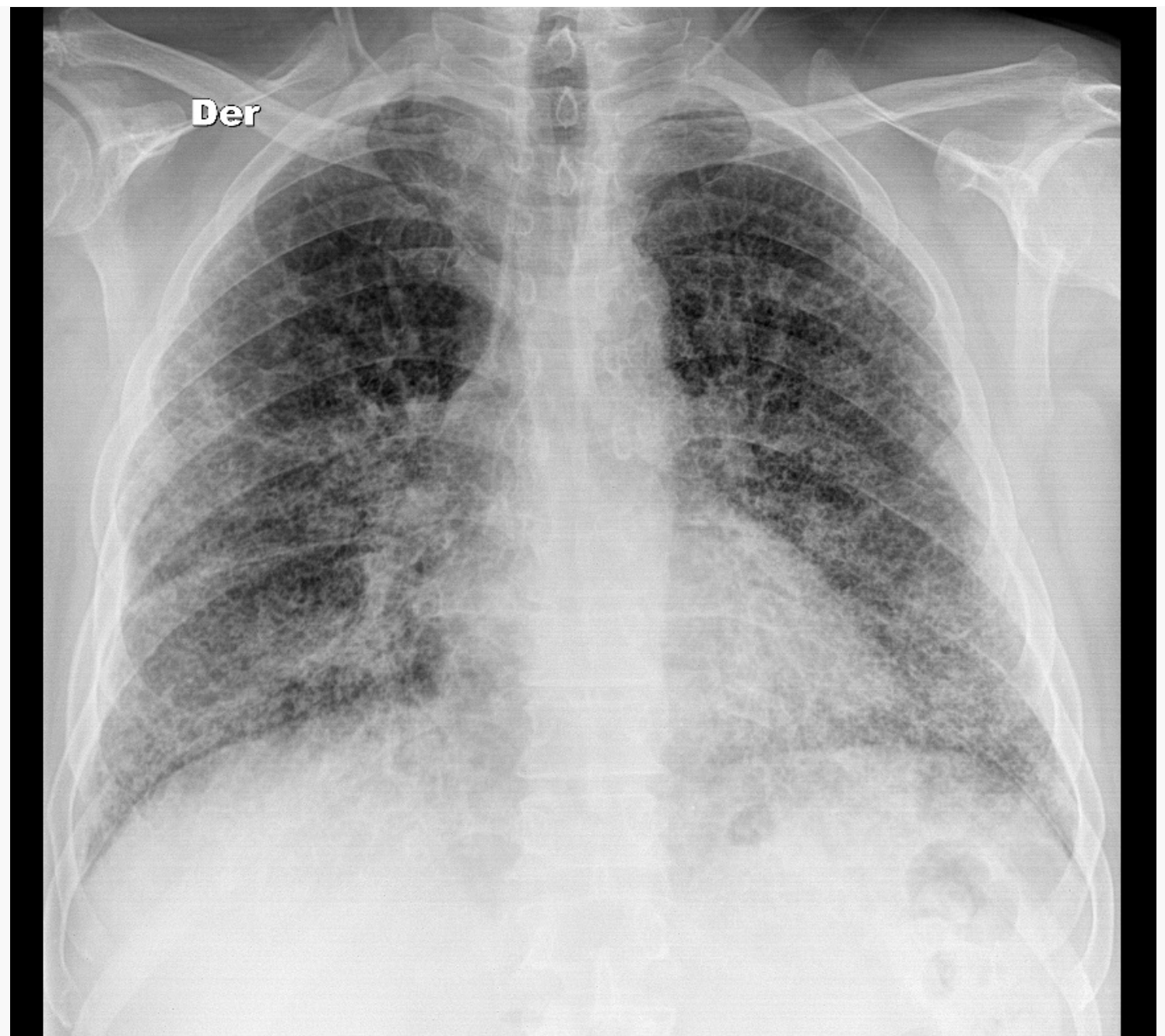
Lung cancer

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Dashboard

Overall score: **0%**

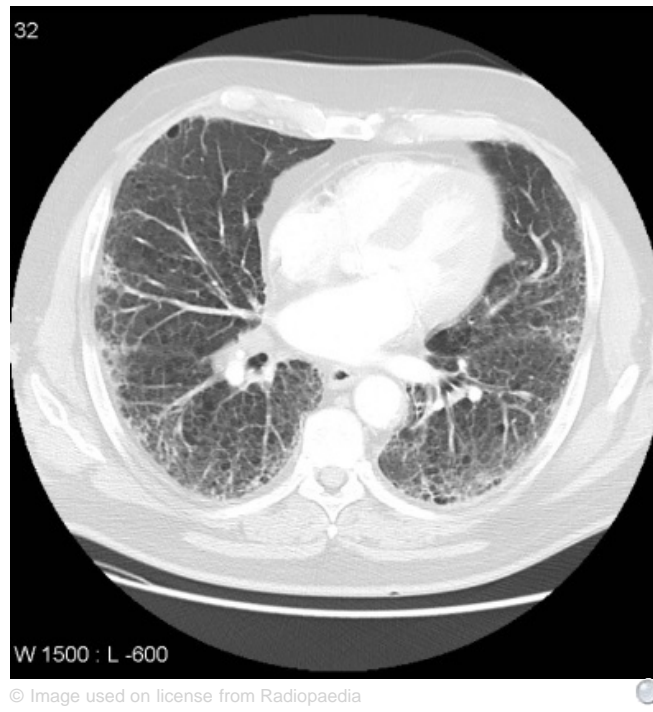
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Question 26 of 200

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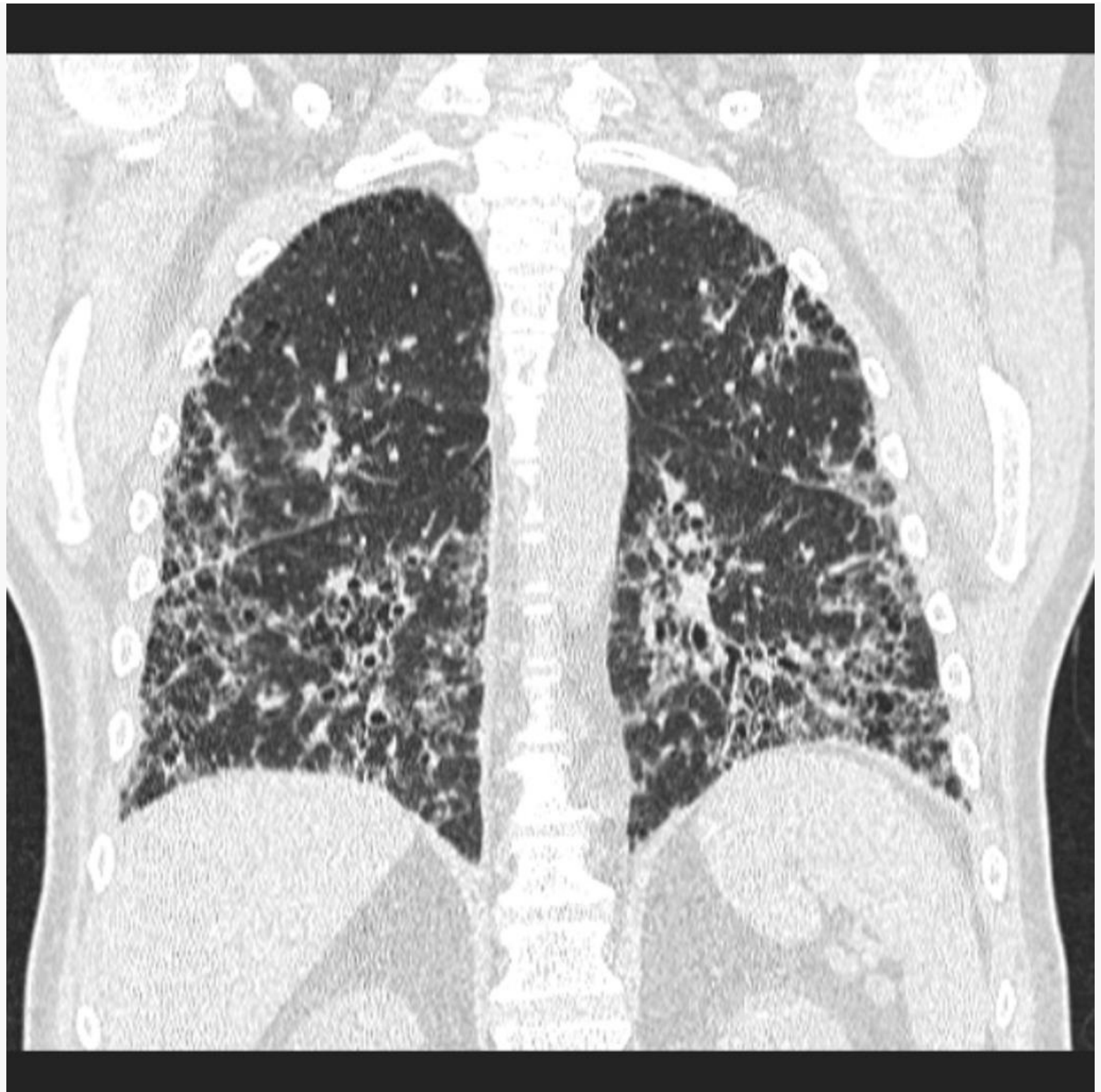
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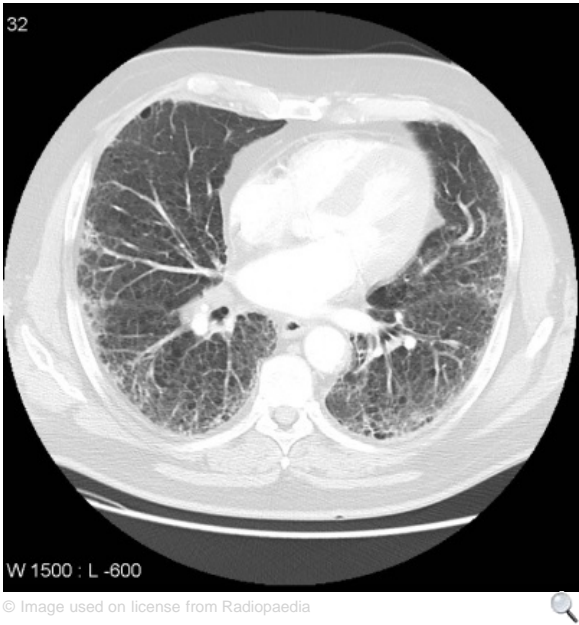
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Question 26 of 200



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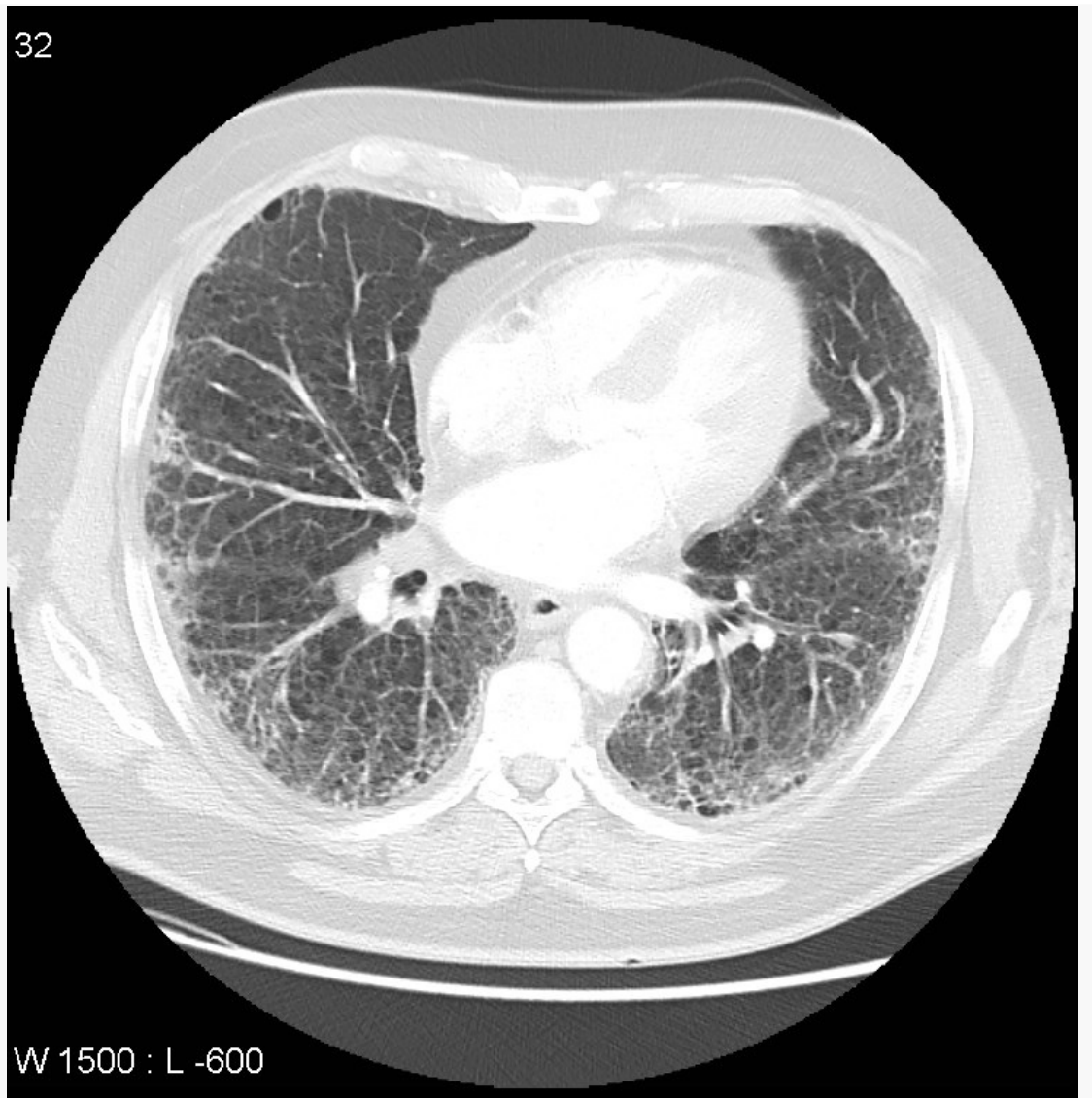
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	Multiple pulmonary embolisms
	Bronchiectasis
	Emphysema

Dashboard

Overall score: 0%

1 -



□ Question 27 of 200

□ □

A 22 year old agricultural student presents to a Respiratory clinic with cough, breathlessness, fatigue with weight loss of 2 kg for 6 weeks. Examination reveals bilateral wheeze and crackles. His GP has tried 2 courses of antibiotics and Salbutamol inhaler with no real benefit; he had some relief from a short course of oral prednisolone. He denies any fever, haemoptysis, foreign travel or exposure to TB. He has never smoked.

His chest radiograph shows mid to upper zone alveolar fine nodular shadowing bilaterally. His lung function shows a FVC (forced vital capacity) of 70% and FEV1/FVC of 85% predicted. Bloods show:

CRP	3 mg/l
ESR	45mm/hr

What is the most likely diagnosis?

	Pulmonary embolus (PE)
	Community acquired pneumonia
	Asthma
	Extrinsic allergic alveolitis
	Silicosis

Dashboard

Overall score: 0%

1 -

Question 27 of 200

□ □

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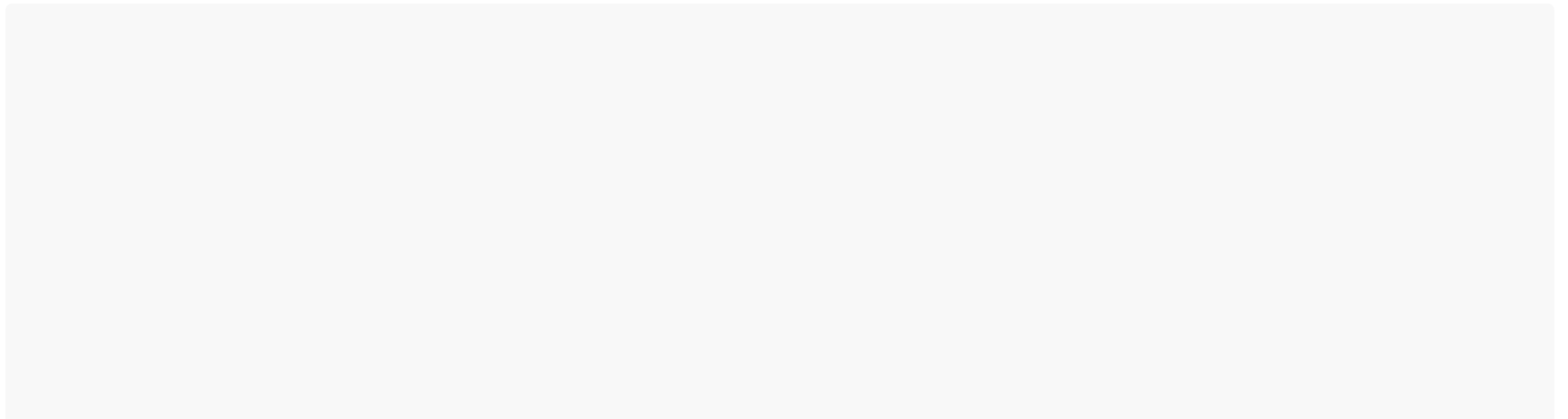
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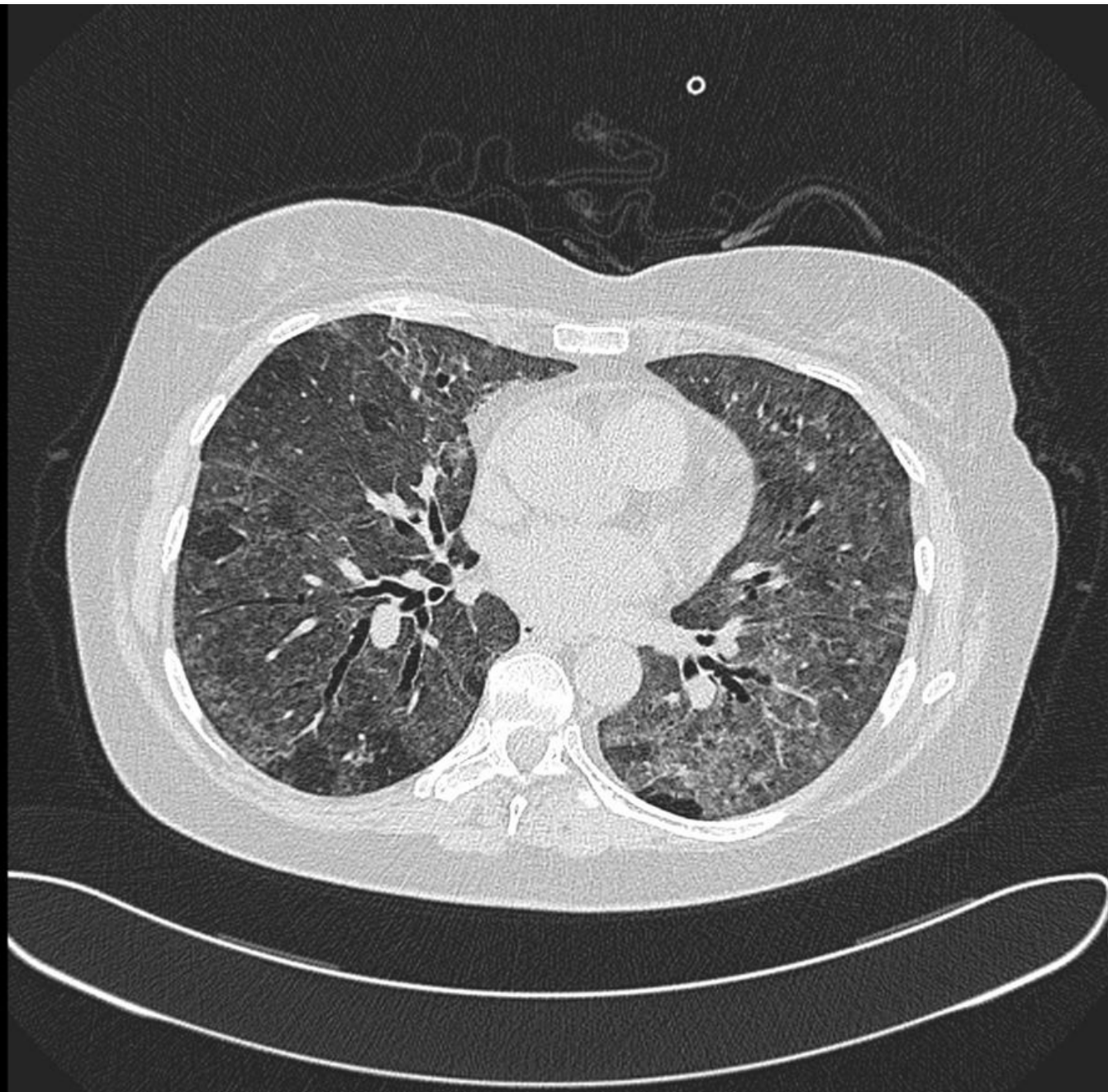
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Dashboard

Overall score: **0%****1** -



□ Question 28 of 200



A 57-year-old woman, originally from Thailand, presents with a 3 week history of haemoptysis, a dry irritating cough and progressive shortness of breath that has reduced her ability to climb stairs and walk distances greater than roughly 50 meters. She has no other medical history of note apart from an appendectomy when younger. She takes no regular medication except for over the counter herbal remedies that she gets from a local Chinese medicine shop, although she cannot remember what these are called. She smokes 10 cigarettes per day and does not drink alcohol.

Examination reveals heart sounds 1 and 2 present with no added sounds. Some crackles across the chest. Observations are normal.

Blood tests reveal:

Hb	99 g/l
MCV	74 fL
Platelets	$196 \times 10^9/l$
WBC	$14.8 \times 10^9/l$
Na ⁺	133 mmol/l
K ⁺	5.0 mmol/l
Urea	15 mmol/l
Creatinine	193 μ mol/l
ESR	92 mm/hr

A chest x-ray is performed which reveals some diffuse alveolar infiltrates but no focal areas of consolidation. A sputum sample is analysed for MC and S and shows no malignant cells.

What is the most likely diagnosis?

	Polyarteritis nodosa

	Pulmonary embolism
	Goodpasture's syndrome
	Churg-Strauss syndrome
	Sarcoidosis

Dashboard

Overall score: **0%**
1 -

□ Question 28 of 200



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Dashboard

Overall score: **0%**
1 -

Question 29 of 200

□ □

A 55-year-old, non-smoker presents to the Emergency Department with sudden onset pleuritic chest pain. He has no documented history of lung disease and is a non-smoker. On examination, he had reduced air entry on the right with bilateral fine end-inspiratory crepitations to the midzones. He is clubbed. A chest x-ray confirms a right sided pneumothorax, measuring 0.5 cm at the hilum. He is not breathless and peripheral oxygen saturations are 94% on air.

What would be the correct course of action?

	Insert a Seldinger chest drain
	Discharge with clinic follow up in 2-4 weeks
	Discharge without follow up
	Aspirate up to 2.5L and repeat chest x-ray
	Admit for 24 hours with conservative treatment

Dashboard

Overall score: 0%

1 -

□ Question 29 of 200

□ □

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Dashboard

Overall score: **0%**

1 -

□ Question 30 of 200

□ □

A 66 year old retired farmer presents with a 4 week history of increasing shortness of breath, non-specific non-pleuritic chest pain and weight loss. His past medical history includes previous angina, for which he was previously prescribed a GTN spray that he has not required for 3 years and hypertension. He is known to keep racing pigeons in a barn on his property. He keeps active and lives with his wife, drinks moderate amount of alcohol and is an active smoker with a 40 pack year history. He has no known allergies. On examination, you note bilateral clubbing and tar staining. Respiratory examination revealed a respiratory rate of 19 breaths per minute, sats 94% on air, reduced bilateral chest expansion and reduced air entry in both bases associated with dullness to percussion.

A chest radiograph demonstrates moderate right >left bilateral pleural effusions and patchy opacities across both lung fields in a non-lobar distribution. CT thorax with high resolution slices demonstrates bilateral pleural effusion, thickened pleura with no lung parenchyma abnormalities.

Lung function testing demonstrates FEV1 1.7ls, FVC 55% of predicted.

What is the appropriate next investigation?

	CT chest/abdomen/pelvis with contrast
	High resolution CT chest (HRCT)
	Video assisted thoracoscopic biopsy (VATS)
	Chest drain
	Bronchoscopy with bronchoalveolar lavage (BAL)

Dashboard

Overall score: 0%

1 -

□ Question 30 of 200

□ □

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	Chest drain
	Bronchoscopy with bronchoalveolar lavage (BAL)

Dashboard

Overall score: **0%****1** -

□ Question 31 of 200

□ □

A 74-year-old male presents to the acute medical take with left sided chest pain, worse on inspiration. On examination, you note his nails are yellow and clubbed with bilateral non-pitting oedema. Examination of his chest reveals reduced air entry of his left lung to mid zone, dull to percussion, with no wheeze.

He has a known past medical history of bronchiectasis diagnosed 2 years ago, for which he has been admitted 3 times in the past 5 months. He reports weight loss of about 8kg in the past 9 months. He last underwent an echocardiogram 2 years ago, during which a left ventricular ejection fraction of 56% was demonstrated.

A chest radiograph demonstrates a large left pleural effusion and a mark has been made by ultrasound for a pleural tap.

Pleural fluid analysis results are as follows:

pH	7.42
Protein	40 g/L (serum 58)
LDH	130 IU/L (serum 181)
Glucose	3.5 mmol/l (serum 6.2)
Amylase	22 u/l (serum 32)
Triglycerides	1.90 mmol/L (serum 2.2)
Cytology	awaited
AFB	awaited

What is the unifying diagnosis?

	Parapneumonic effusion
	Yellow nail syndrome

	Malignant pleural effusion
	Oesophageal rupture
	Congestive cardiac failure

Dashboard

Overall score: **0%**
1 -

□ Question 31 of 200



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	Malignant pleural effusion
	Oesophageal rupture
	Congestive cardiac failure

Dashboard

Overall score: **0%**
1 -

□ Question 32 of 200

□ □

The following x-ray was performed on a 68-year-old woman:



© Image used on license from Radiopaedia



What is the main abnormality that can be seen?

<input type="checkbox"/>	Pneumoperitoneum
<input type="checkbox"/>	Pulmonary oedema

	Left hilar mass
	Left upper lobe collapse
	Left sided pneumothorax

Dashboard

Overall score: **0%**

1 -

□ Question 32 of 200

□ □

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© Image used on license from Radiopaedia



What is the main abnormality that can be seen?

Pneumoperitoneum

Pulmonary oedema

	Left hilar mass
	Left upper lobe collapse
	Left sided pneumothorax

Dashboard

Overall score: **0%**
1 -

□ Question 33 of 200



A 64 year-old female patient with known chronic obstructive pulmonary disease presents for routine review at respiratory outpatients. She is currently taking inhaled tiotropium and salmeterol/fluticasone at optimal doses. You note she has had two exacerbations in the previous 12 months requiring oral steroids and antibiotics. A recent high resolution CT showed severe emphysema affecting all lobes.

Her ABGs in clinic today is a follows:

pH	7.38
pO ₂	7.91 kPa
pCO ₂	6.7 kPa
HCO ₃	30.1 mmol/L
Sats	88%

Her blood tests today show:

Hb	16.6 g/dL
Platelets	256 x 10 ⁹ /L
WCC	6.7 x 10 ⁹ /L

How would you optimise her management further?

<input type="checkbox"/>	Refer to lung volume reduction surgery
<input type="checkbox"/>	Make no changes to current management
<input type="checkbox"/>	Consider long term oxygen therapy
<input type="checkbox"/>	Start prophylactic antibiotics

	Refer for assessment for home non-invasive ventilation
--	--

Dashboard

Overall score: **0%**

1 -

□ Question 33 of 200



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	Consider long term oxygen therapy
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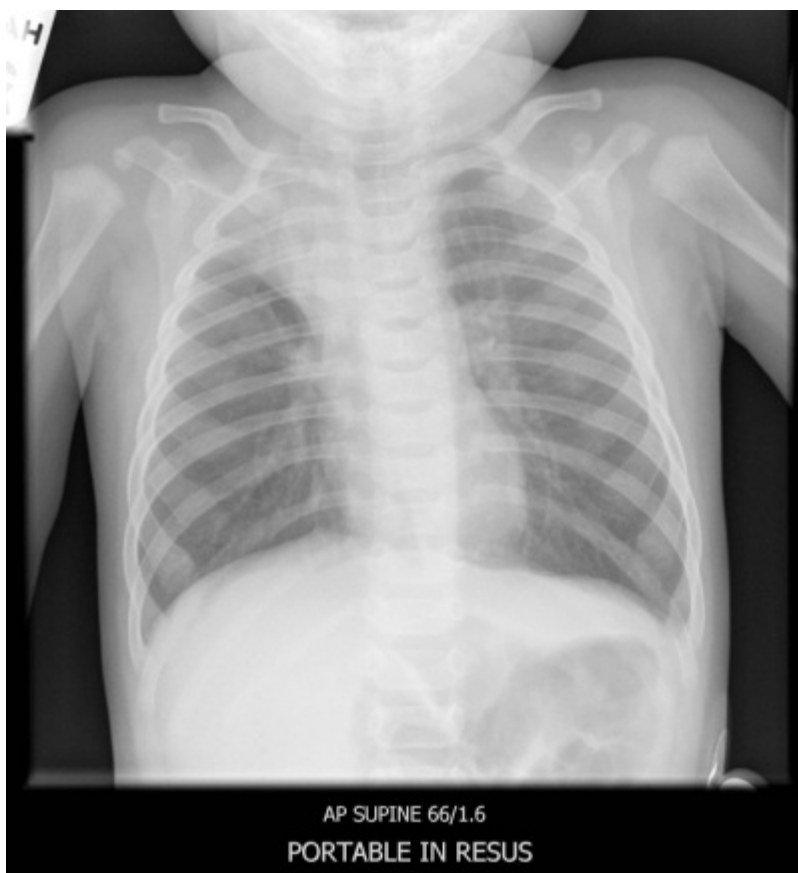
Dashboard

Overall score: **0%**
1 -

Question 34 of 200

□ □

The x-ray below was taken from a 7-year-old child who presented to the Emergency Department with respiratory symptoms:



© Image used on license from Radiopaedia



What does the x-ray show?

	Cystic fibrosis

	Right upper lobe collapse
	Lung cancer
	Right-sided pneumothorax
	Normal

Dashboard

Overall score: **0%**

1 -

□ Question 34 of 200

□ □

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© Image used on license from Radiopaedia



What does the x-ray show?

Cystic fibrosis

	Right upper lobe collapse
	Lung cancer
	Right-sided pneumothorax
	Normal

Dashboard

Overall score: **0%**
1 -

□ Question 35 of 200

□ □

A 73-year-old gentleman presents to oncology clinic with a two-week history of shortness of breath. He has a background of mesothelioma diagnosed two years ago. He has noticed that he has been finding it more difficult to walk distances without developing shortness of breath, and today struggled to make it into the clinic from the car-park, 200 yards away. He denies having a cough or fever but has been feeling more tired lately. Saturations are 95% whilst breathing room and his blood pressure, temperature, heart rate and respiratory rate are all within normal parameters.

A chest X-ray is done which demonstrates a right-sided pleural effusion. He is admitted to hospital and a chest drain is inserted, draining three litres of blood-stained fluid in two hours. He becomes increasingly short of breath and starts to cough. He denies any chest pain. On examination, he is uncomfortable and breathing 4L of oxygen via a non-rebreather mask. There are bilateral crepitations in his chest.

	25/11/16 16:31	25/11/16 14:18
Saturations	91%	95%
Respiratory rate	22/min	18/min
Blood pressure	131/81mmHg	139/85mmHg
Heart rate	101/min	71/min
Temperature	37.0°C	37.1°C

What is the likely diagnosis?

	Empyema
	Iatrogenic chest infection
	Re-expansion pulmonary oedema
	Pneumothorax
	PE

Dashboard

Overall score: **0%**

1 -

Question 35 of 200

□ □

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	Re-expansion pulmonary oedema
	Pneumothorax
	PE

Dashboard

Overall score: **0%**

1 -

Question 36 of 200

□ □

A 62-year-old gentleman presents to clinic with increasing shortness of breath on exertion. His symptoms have progressed over three months and he has now become concerned as he is struggling to walk through the park without stopping to catch his breath. He has also noticed a new, raised lesion on his chin. He has a few unexplained temperatures within the last week as well and has noticed mild joint pain. He assumed that the latter was arthritis but has not suffered from this before. He has a past medical history of hypertension, glaucoma and has been hospitalised with pneumonia within the last year.

On examination, he has a 1cm wide, raised lesion on his chin which is purple in colour with some telangiectasia. He does not have a fever currently and his observations are all within normal limits. There is no finger clubbing. There is bilateral cervical lymphadenopathy and auscultation demonstrates bibasal fine inspiratory crackles. These do not shift with coughing. A chest X-ray is requested. What is it most likely to show?

	Cavitating lesion
	Pleural effusion
	Bilateral consolidation
	Bilateral hilar lymphadenopathy
	Apical fibrosis

Dashboard

Overall score: 0%

1 -

□ Question 36 of 200

□ □

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	Cavitating lesion
	Pleural effusion
	Bilateral consolidation
	Bilateral hilar lymphadenopathy
	Apical fibrosis

Dashboard

Overall score: **0%****1** -

Question 37 of 200



A 24 year-old male with no significant past medical history presents with a 4 hour history of chest pain and breathlessness. The pain is right sided and is sharp in nature, worsening on deep inspiration.

There is no significant past medical history. On examination he is tachypnoeic with a respiratory rate of 26 breaths per minute. His oxygen saturations are 97% on room air. His pulse rate is 100bpm with a blood pressure of 136 / 82mmHg. A 12-lead ECG reveals sinus tachycardia with a rate of 102 beats per minute.

Arterial blood gas analysis reveals:

pO ₂	11.8kPa
pCO ₂	4.3 kPa
pH	7.45
Bicarbonate	24mEq/L

A chest radiograph reveals a right-sided pneumothorax 1.8cm in width at the level of the hilum.

What is the most appropriate initial management?

<input type="checkbox"/>	High-flow oxygen
<input type="checkbox"/>	Pleural aspiration
<input type="checkbox"/>	Observe for 24 hours
<input type="checkbox"/>	Insert chest drain
<input type="checkbox"/>	Talc pleurodesis

Overall score: **0%**

1 -

Question 37 of 200



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	High-flow oxygen
	Pleural aspiration
	Observe for 24 hours
	Insert chest drain
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Dashboard

Overall score: **0%**

1 -

□ Question 38 of 200



A 68-year-old man presents to hospital with progressive shortness of breath over the last four days and a low-grade fever. He has a past medical history of mild asthma for which he occasionally needs to use his salbutamol inhaler and has previously had bilateral knee replacements for osteoarthritis. He has smoked on average 5 cigarettes per day for the past 40 years and drinks a couple of glasses of wine per week. His travel history includes a holiday to Cyprus, from which he arrived back in the UK 5 days ago.

Examination revealed some right mid zone crackles and reduced breath sounds over this area. Observations revealed a temperature of 38.8°C, heart rate of 110 bpm, blood pressure of 105/66 mmHg, respiratory rate of 22 breaths per minute and oxygen saturations of 91% on room air.

Blood tests revealed:

Hb	145 g/l
Platelets	290 * 10 ⁹ /l
WBC	9.4 * 10 ⁹ /l
Na ⁺	132 mmol/l
K ⁺	3.7 mmol/l
Urea	4.1 mmol/l
Creatinine	67 µmol/l

Urinary sodium concentration was measured and found to be 36mmol/L (normal range 40-220 mmol/d). Which of the following investigations is most useful in the diagnosis of this condition?

	Urine antigen test
	Serum antibody test
	Sputum PCR

	CT pulmonary angiography
	D-dimer

Dashboard

Overall score: **0%**

1 -

□ Question 38 of 200



A 68-year-old man presents to hospital with progressive shortness of breath over the last four days and a low-grade fever. He has a past medical history of mild asthma for which he occasionally needs to use his salbutamol inhaler and has previously had bilateral knee replacements for osteoarthritis. He has smoked on average 5 cigarettes per day for the past 40 years and drinks a couple of glasses of wine per week. His travel history includes a holiday to Cyprus, from which he arrived back in the UK 5 days ago.

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Dashboard

Overall score: **0%**
1 -

Question 38 of 200

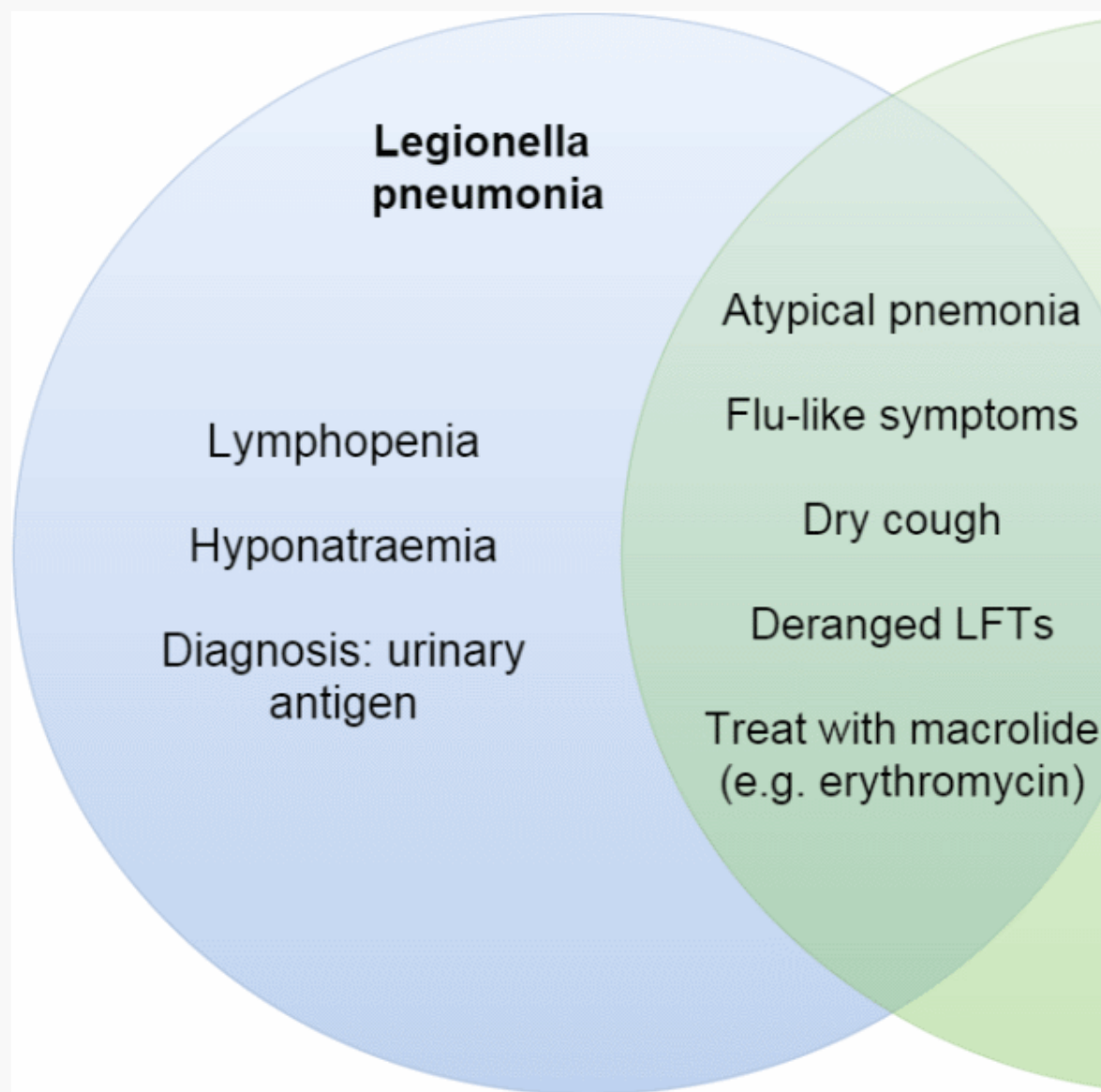
A 68-year-old man presents with fever. He has a past medical history of bilateral pneumonia. He has previously had bilateral pneumonia over the past 40 years and drinks a moderate amount of alcohol, which he arrived back in the country after a holiday in Spain.

Examination revealed some tachypnoea, a temperature of 38.8°C, heart rate of 100/min and oxygen saturations of 90% on room air.

Blood tests revealed:

Hb	145 g/l
Platelets	290 * 10 ⁹ /l
WBC	9.4 * 10 ⁹ /l
Na ⁺	132 mmol/l
K ⁺	3.7 mmol/l
Urea	4.1 mmol/l
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Dashboard

Overall score: **0%**
1 -

□ Question 38 of 200



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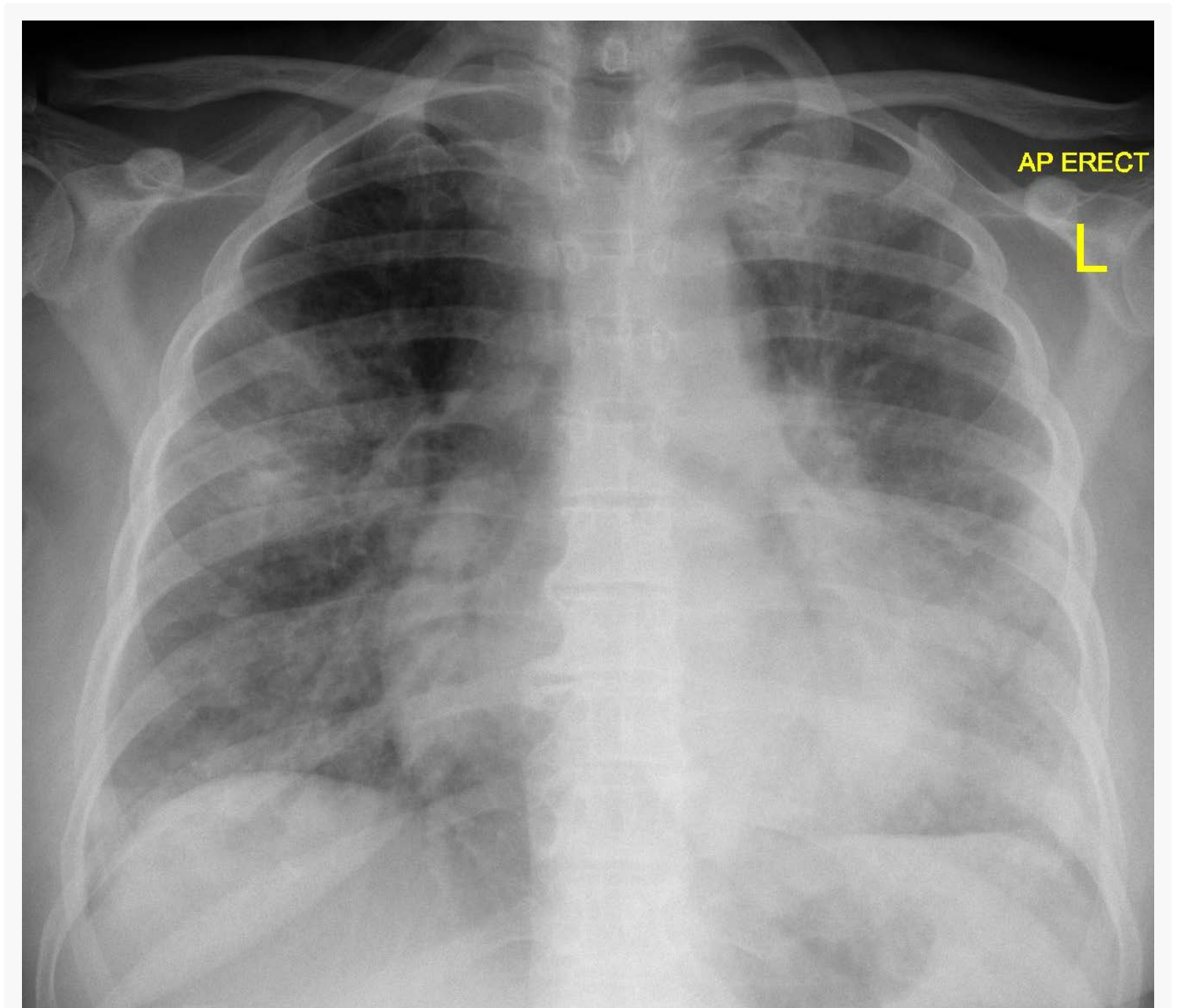
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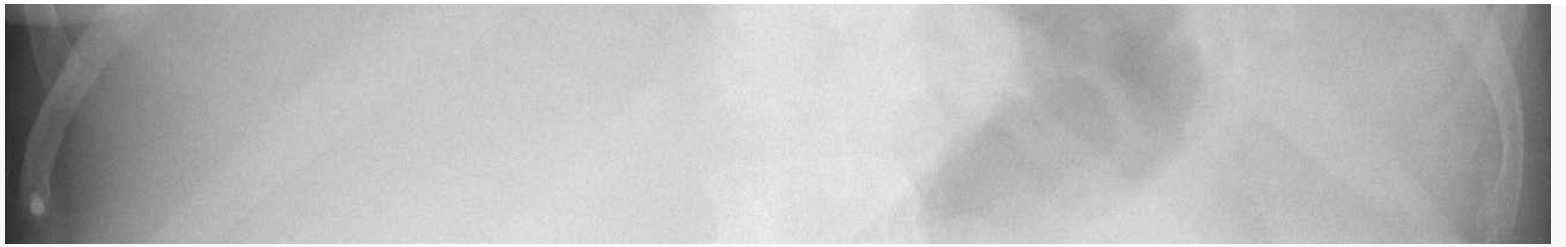
	Urine antigen test
	Serum antibody test
	Sputum PCR
	CT pulmonary angiography

Dashboard

Overall score: **0%**

1 -





Question 39 of 200

□ □

A 60-year-old man presented to the sleep clinic with snoring, excessive day time sleepiness and fatigue. His partner also mentioned that she could see him choking on and off during sleeping and that scared her. He also had underlying hypertension, arrhythmia and osteoarthritis of bilateral knee joints. He drove a car but never had any accidents.

On evaluation, his epworth sleepiness score was 15/24. His BMI was 44, modified mallampati score was class 3. Clinically, obstructive sleep apnoea(OSA) was suspected and he underwent a polysomnography which showed an apnoea hypopnoea index(AHI) of 60/hour. Most of the events were in supine position and during rapid eye movement(REM) sleep. Lowest SpO2 during sleep was 80%.

He was started on continuous positive airway pressure(CPAP) trial but he could not tolerate it and did not want to continue it in spite of repeated counselling and trying different masks. What would you suggest him?

	Weight reduction
	Positional therapy
	Oral appliance
	Modafinil
	Cognitive behavioral therapy

Dashboard

Overall score: 0%

1 -

Question 39 of 200

□ □

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	Weight reduction
	Positional therapy
	Oral appliance
	Modafinil
	Cognitive behavioral therapy

Dashboard

Overall score: **0%**

1 -

Question 40 of 200

□ □

A 50-year-old man is admitted under the respiratory team with a left lower lobe pneumonia. He has a history of chronic obstructive pulmonary disease and continues to smoke. He also suffers with with hypertension and high cholesterol.

He is treated with steroids, nebulisers and antibiotics. After 5 days he continues to be hypoxic with saturations of 86% on air, ongoing left basal crepitations and wheeze.

A CT scan of the chest is performed which shows emphysematous changes and resolving left basal consolidation. There is also a 7mm lung nodule in the right upper lobe with surrounding ground glass change.

Over the next 3 days his saturations improve to 93% on air and his symptoms resolve. He is discharged home.

What imaging does he require to follow up his pulmonary nodule?

	PET CT 2 weeks
	PET CT 4 weeks
	Repeat chest x-ray 4 weeks
	Repeat CT chest 1 year
	Repeat CT chest 3 months

Dashboard

Overall score: 0%

1 -

Question 40 of 200

□ □

A 50-year-old man is admitted under the respiratory team with a left lower lobe pneumonia. He has a history of chronic obstructive pulmonary disease and continues to smoke. He also suffers with with hypertension and high cholesterol.

He is treated with steroids, nebulisers and antibiotics. After 5 days he continues to be hypoxic with saturations of 86% on air, ongoing left basal crepitations and wheeze.

A CT scan of the chest is performed which shows emphysematous changes and resolving left basal consolidation. There is also a 7mm lung nodule in the right upper lobe with surrounding ground glass change.

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	PET CT 4 weeks
	Repeat chest x-ray 4 weeks
	Repeat CT chest 1 year
	Repeat CT chest 3 months

Dashboard

Overall score: **0%**

1 -

Question 41 of 200



A 76 year old woman presents to clinic with shortness of breath. This has been progressing over the last 18 months and is associated with a non-productive cough. She is still able to complete her usual day-to-day tasks, but struggles with more exertional activities such as gardening.

She finished chemotherapy for non-Hodgkin's lymphoma two years ago. She has no other relevant medical history.

Her current medications include allopurinol, bisoprolol, aspirin, simvastatin, paracetamol and codeine.

On examination, she has finger clubbing and diffuse fine crackles on chest auscultation.

Given the likely diagnosis, which of the following spirometry results would you expect?

	FEV1 - 1.4L (71%), FVC - 2.5L (102%), FEV1/FVC ratio - 56%, DLCO - 90% of predicted
	FEV1 - 1.3L (66%), FVC - 1.6L (65%), FEV1/FVC ratio - 81%, DLCO - 75% of predicted
	FEV1 - 1.9L (97%), FVC - 2.4L (98%), FEV1/FVC ratio - 79%, DLCO - 110% of predicted
	FEV1 - 0.9L (45%), FVC - 2.1L (86%), FEV1/FVC ratio - 42%, DLCO - 90% of predicted
	FEV1 - 0.9L (45%), FVC - 1.1L (45%), FEV1/FVC ratio - 81%, DLCO - 120% of predicted

Question 41 of 200

□ □

A 76 year old woman presents to clinic with shortness of breath. This has been progressing over the last 18 months and is associated with a non-productive cough. She is still able to complete her usual day-to-day tasks, but struggles with more exertional activities such as gardening.

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	FEV1 - 1.3L (66%), FVC - 1.6L (65%), FEV1/FVC ratio - 81%, DLCO - 75% of predicted
	FEV1 - 1.9L (97%), FVC - 2.4L (98%), FEV1/FVC ratio - 79%, DLCO - 110% of predicted
	FEV1 - 0.9L (45%), FVC - 2.1L (86%), FEV1/FVC ratio - 42%, DLCO - 90% of predicted
	FEV1 - 0.9L (45%), FVC - 1.1L (45%), FEV1/FVC ratio - 81%, DLCO - 120% of predicted

Dashboard

Overall score: **0%**

1 -

Question 42 of 200



A 43-year-old man with advanced HIV is admitted to the Emergency Department with dyspnoea. For the past two weeks he has been getting increasingly short-of-breath on even minimal exertion.

On admission his temperature was 37.7°C, pulse 96/min, oxygen saturations 92% on room air and blood pressure 110/68 mmHg. Auscultation of the chest revealed scattered crackles bilaterally.

An chest x-ray down on admission showed minimal bilateral pulmonary infiltrates. A few hours after admission his dyspnoea worsens. At CT chest is shown below:



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What is the cause his worsening symptoms?

	Pneumothorax
	<i>Pneumocystis jiroveci</i> -related empyema
	Collapse of right middle lobe secondary to mucous plugging
	Miliary tuberculosis
	Pulmonary cryptococcosis with bullae formation

Dashboard

Overall score: **0%**

1 -

Question 42 of 200



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1 -

Question 42 of 200

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Overall score: 0%

1 -

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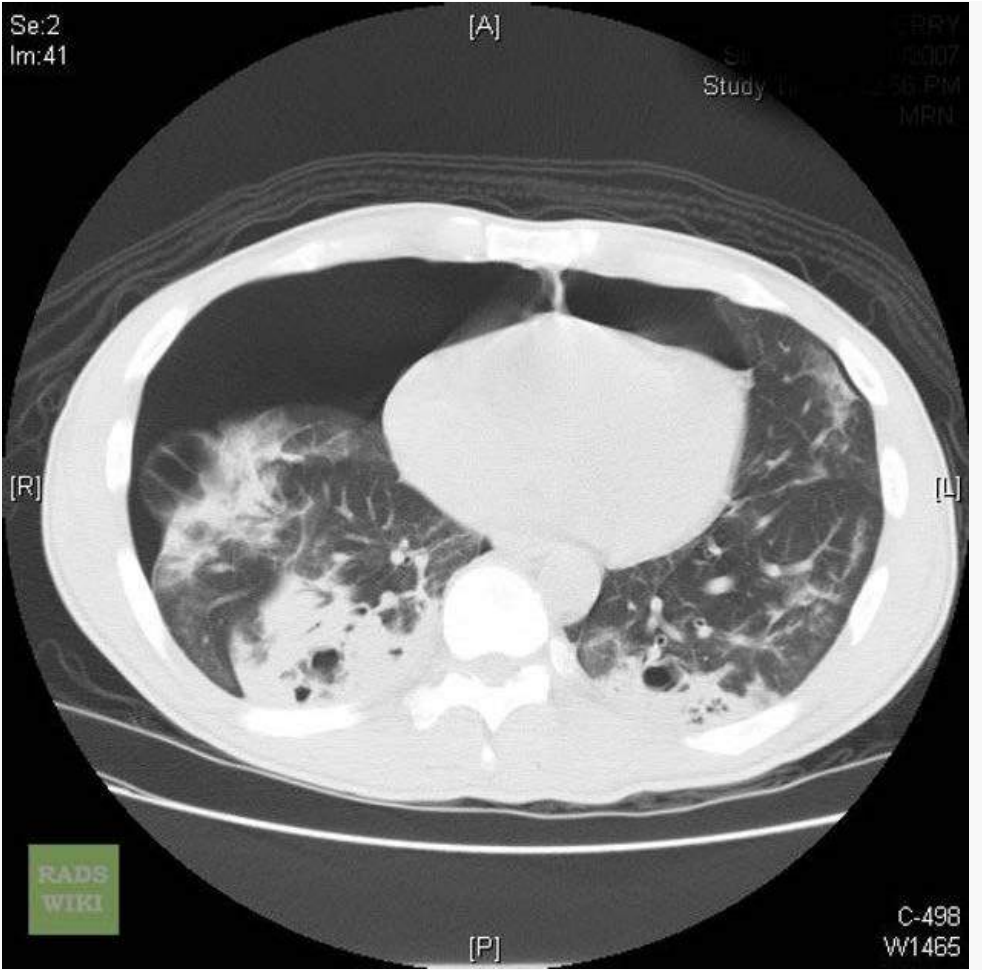
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□ Question 43 of 200

□ □

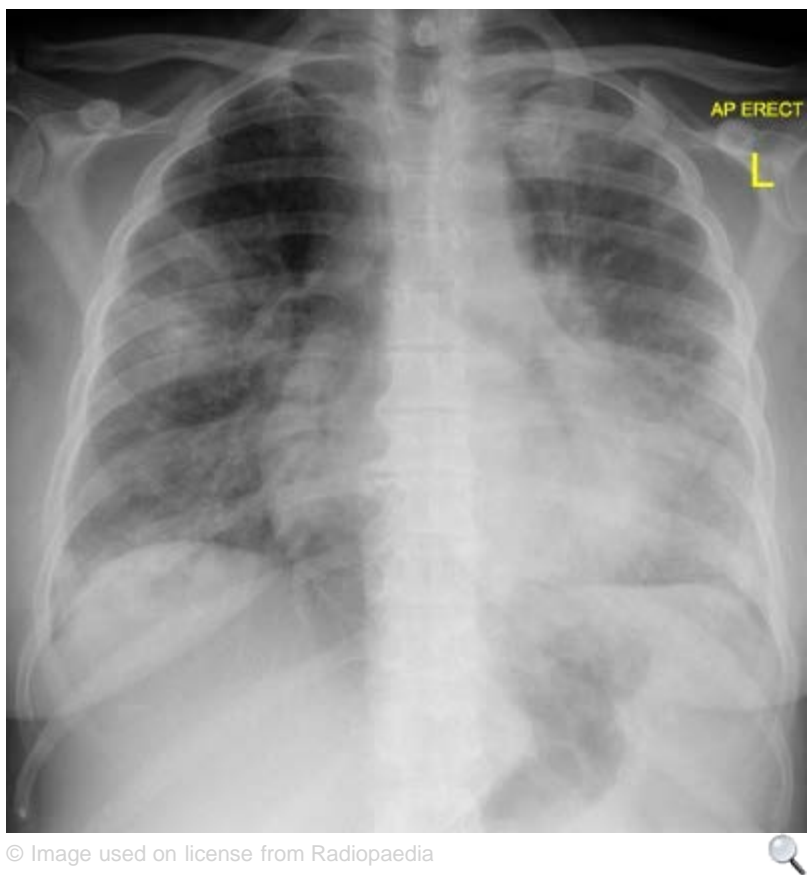
A 54-year-old woman presents to the Acute Medical Unit with a three day history of fever, myalgia and a non-productive cough. She initially thought her symptoms were due to the 'flu but over the past 24 hours has been feeling progressively more poorly. She now also has nausea, abdominal pain, headaches and diarrhoea.

On examination her pulse is 84/min, temperature 39.4°C and blood pressure 106/76 mmHg. Bilateral scattered crackles are noted on auscultation.

Bloods show the following:

Hb	12.4 g/l	Na ⁺	133 mmol/l
Platelets	363 * 10 ⁹ /l	K ⁺	5.0 mmol/l
WBC	12.1 * 10 ⁹ /l	Urea	7.8 mmol/l
Neuts	10.8 * 10 ⁹ /l	Creatinine	88 µmol/l
Lymphs	1.1 * 10 ⁹ /l	CRP	145 mg/l
Eosin	0.2 * 10 ⁹ /l		

The chest x-ray is shown below:



Which investigation is most likely to be diagnostic?

	Sputum culture
	Cold agglutinins
	Bronchoalveolar lavage
	Blood serology
	Urinary antigen

Dashboard

Overall score: 0%

1 -

□ Question 43 of 200



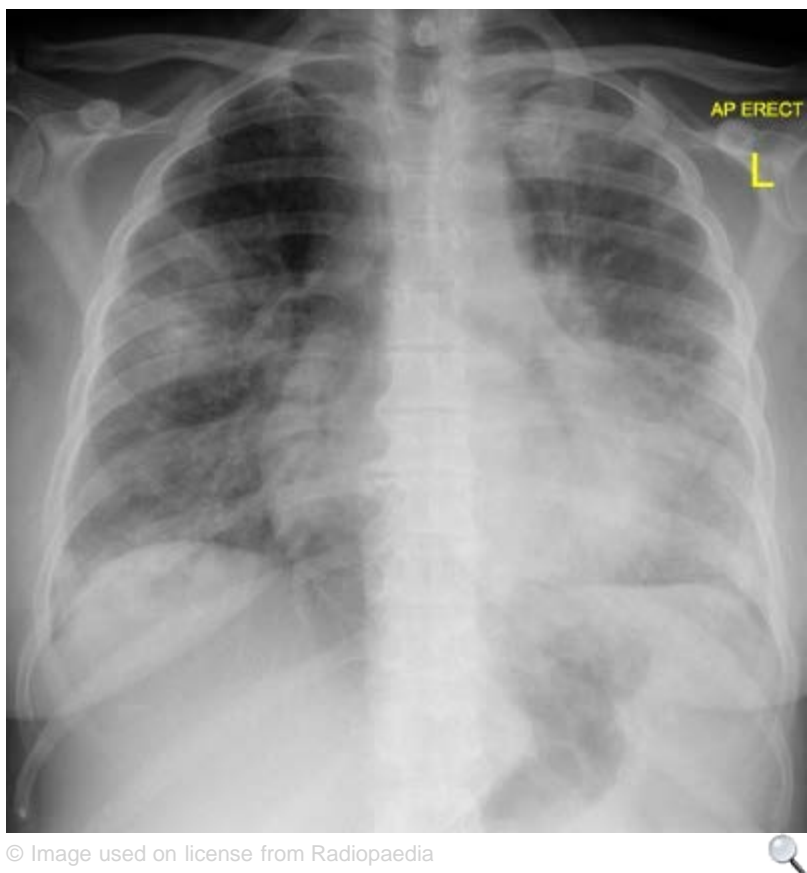
A 54-year-old woman presents to the Acute Medical Unit with a three day history of fever, myalgia and a non-productive cough. She initially thought her symptoms were due to the 'flu but over the past 24 hours has been feeling progressively more poorly. She now also has nausea, abdominal pain, headaches and diarrhoea.

On examination her pulse is 84/min, temperature 39.4°C and blood pressure 106/76 mmHg. Bilateral scattered crackles are noted on auscultation.

Bloods show the following:

Hb	12.4 g/l	Na ⁺	133 mmol/l
Platelets	363 * 10 ⁹ /l	K ⁺	5.0 mmol/l
WBC	12.1 * 10 ⁹ /l	Urea	7.8 mmol/l
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Lymphs	1.1 * 10 ⁹ /l	CRP	145 mg/l
Eosin	0.2 * 10 ⁹ /l		

The chest x-ray is shown below:



Which investigation is most likely to be diagnostic?

	Sputum culture
	Cold agglutinins
	Bronchoalveolar lavage
	Blood serology
	Urinary antigen

Dashboard
Overall score: 0%
1 -

Question 43 of 200

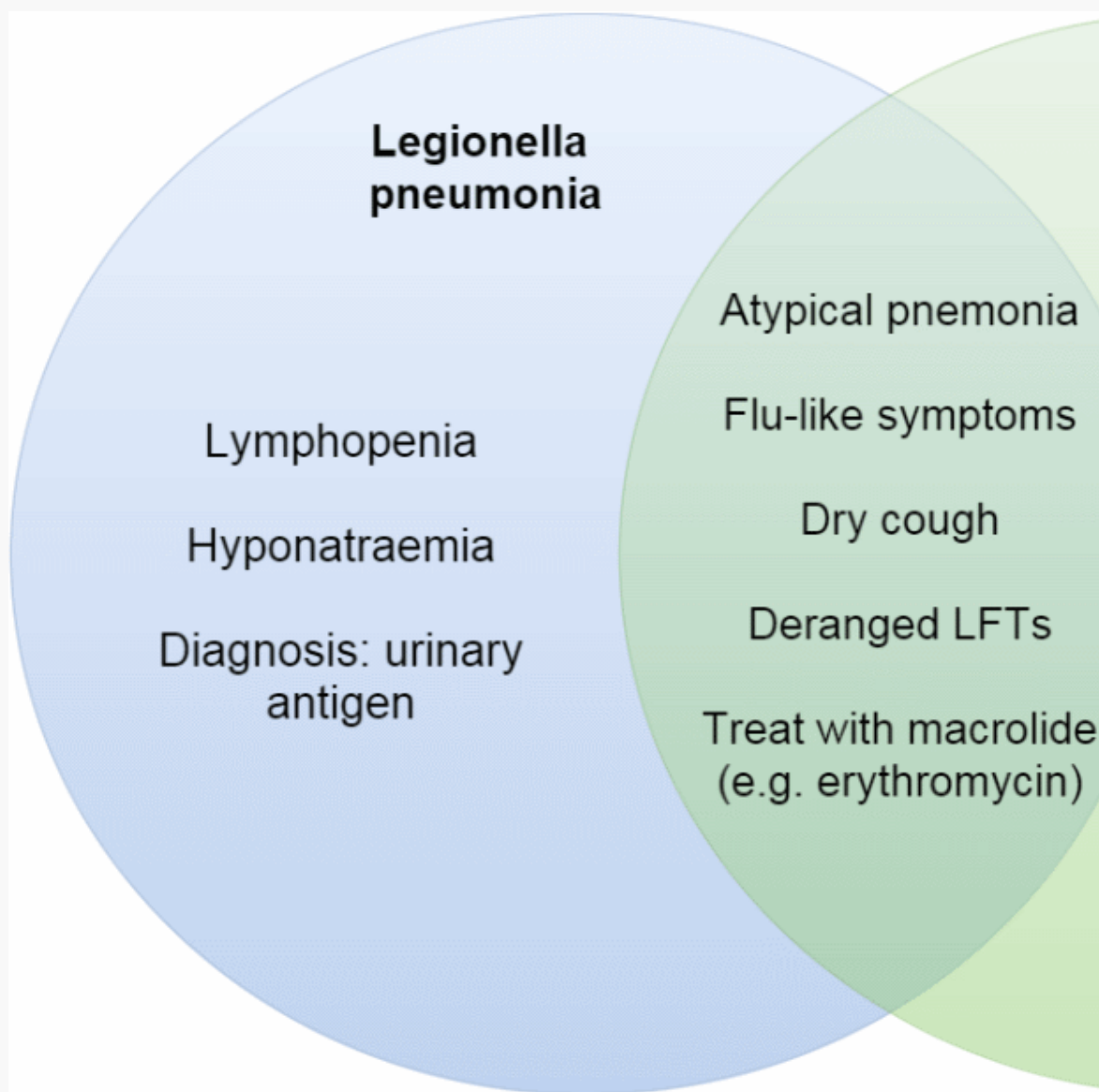
A 54-year-old woman presents with a 2-week history of dry cough. She initially thought it was a cold but it has not improved. She now also has a low-grade fever.

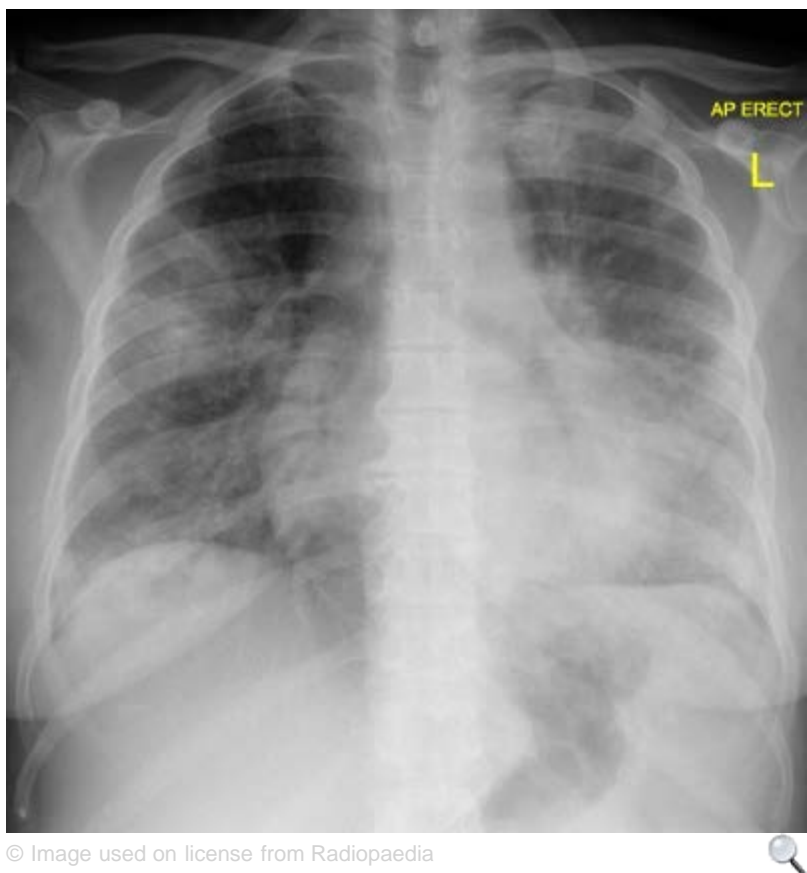
On examination her pulse is 98/min, blood pressure is 110/70 mmHg, and crackles are noted on auscultation.

Bloods show the following:

Hb	12.4 g/l	N	
Platelets	363 * 10 ⁹ /l	K	
WBC	12.1 * 10 ⁹ /l	U	
Neuts	10.8 * 10 ⁹ /l	C	
Lymphs	1.1 * 10 ⁹ /l	CRP	145 mg/l
Eosin	0.2 * 10 ⁹ /l		

The chest x-ray is shown below:





© Image used on license from Radiopaedia

Which investigation is most likely to be diagnostic?

	Sputum culture
	Cold agglutinins
	Bronchoalveolar lavage
	Blood serology
	Urinary antigen

Dashboard

Overall score: **0%**

1 -

□ Question 43 of 200

□ □

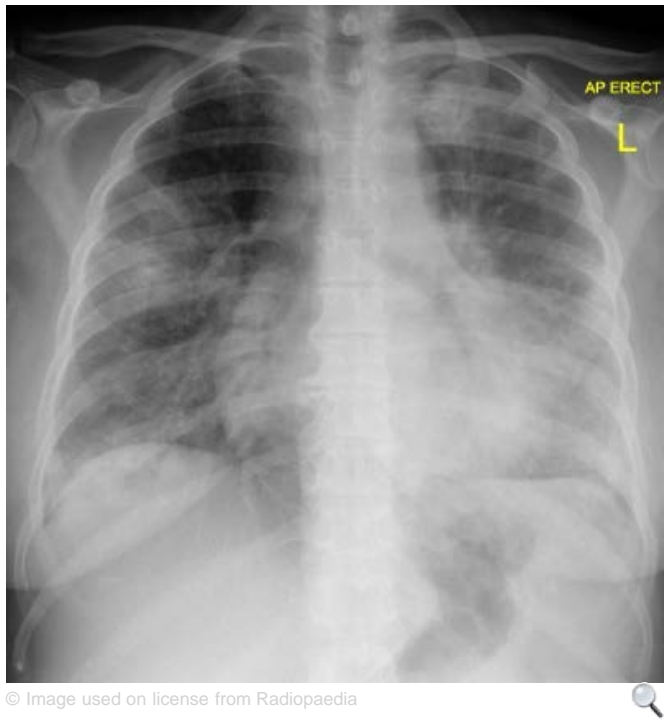
A 54-year-old woman presents to the Acute Medical Unit with a three day history of fever, myalgia and a non-productive cough. She initially thought her symptoms were due to the 'flu but over the past 24 hours has been feeling progressively more poorly. She now also has nausea, abdominal pain, headaches and diarrhoea.

On examination her pulse is 84/min, temperature 39.4°C and blood pressure 106/76 mmHg. Bilateral scattered crackles are noted on auscultation.

Bloods show the following:

Hb	12.4 g/l	Na ⁺	133 mmol/l
Platelets	363 * 10 ⁹ /l	K ⁺	5.0 mmol/l
WBC	12.1 * 10 ⁹ /l	Urea	7.8 mmol/l
Neuts	10.8 * 10 ⁹ /l	Creatinine	88 µmol/l
Lymphs	1.1 * 10 ⁹ /l	CRP	145 mg/l
Eosin	0.2 * 10 ⁹ /l		

The chest x-ray is shown below:



Which investigation is most likely to be diagnostic?

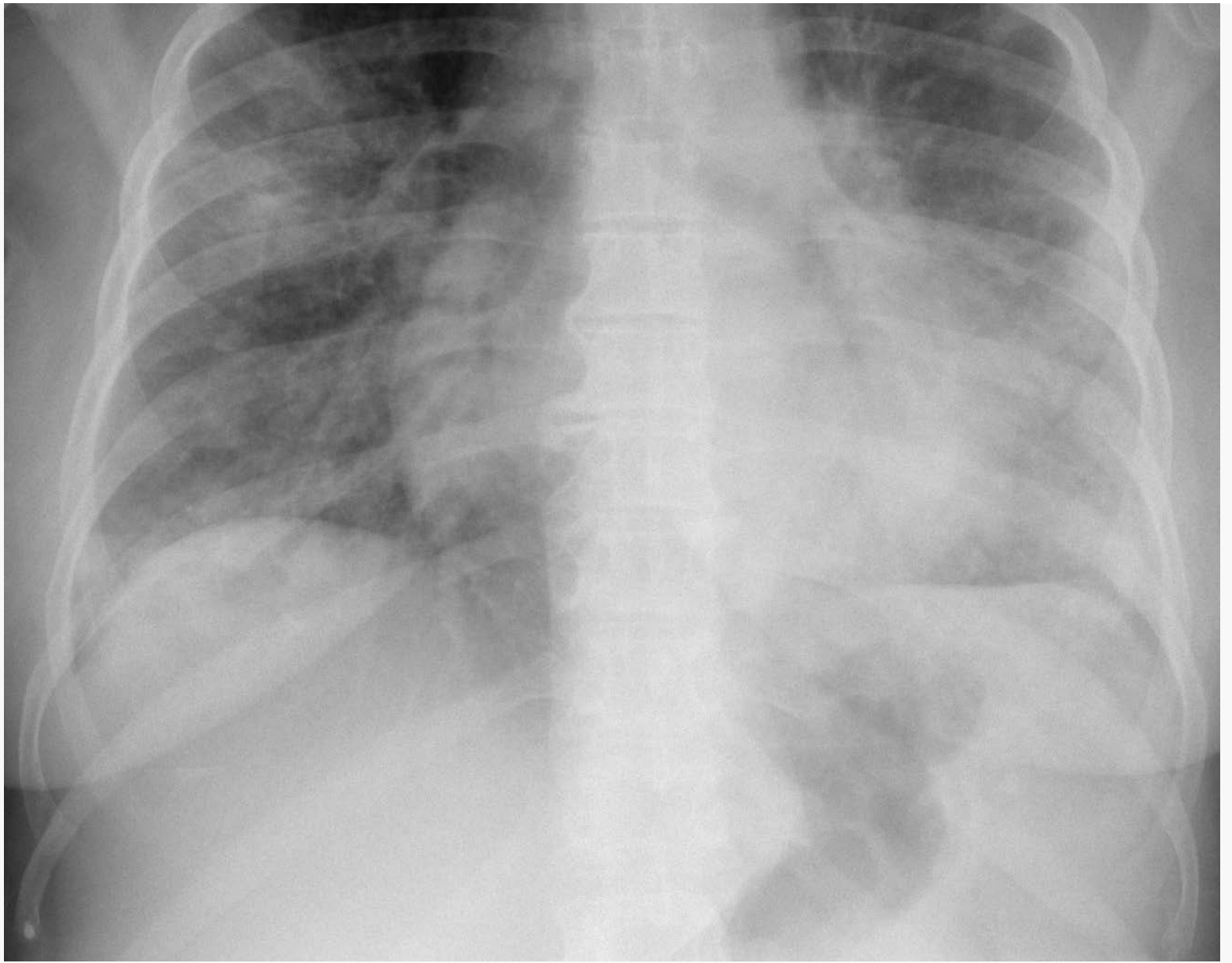
	Sputum culture
	Cold agglutinins
	Bronchoalveolar lavage
	Blood serology
	Urinary antigen

Dashboard

Overall score: 0%

1 -





Question 44 of 200

□ □

A 25-year-old man presents feverish with a productive cough. He is reluctant to tell you about himself. On examination, he has bronchial breathing at both bases. He has normal heart sounds. His observations show a respiratory rate of 24/min, oxygen saturations of 94% on room air, a temperature of 38 degrees celsius, heart rate of 98/min, blood pressure 100/64mmHg. There are track marks on his arms. Which organism is responsible?

	<i>Staphylococcus aureus</i>
	<i>Streptococcus pneumoniae</i>
	<i>Klebsiella pneumoniae</i>
	<i>Pneumocystis jirovecii</i>
	<i>Mycoplasma pneumoniae</i>

Dashboard

Overall score: 0%

1 -

Question 44 of 200

□ □

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	<i>Pneumocystis jirovecii</i>
	<i>Mycoplasma pneumoniae</i>

Dashboard

Overall score: **0%**

1 -

□ Question 44 of 200

□ □

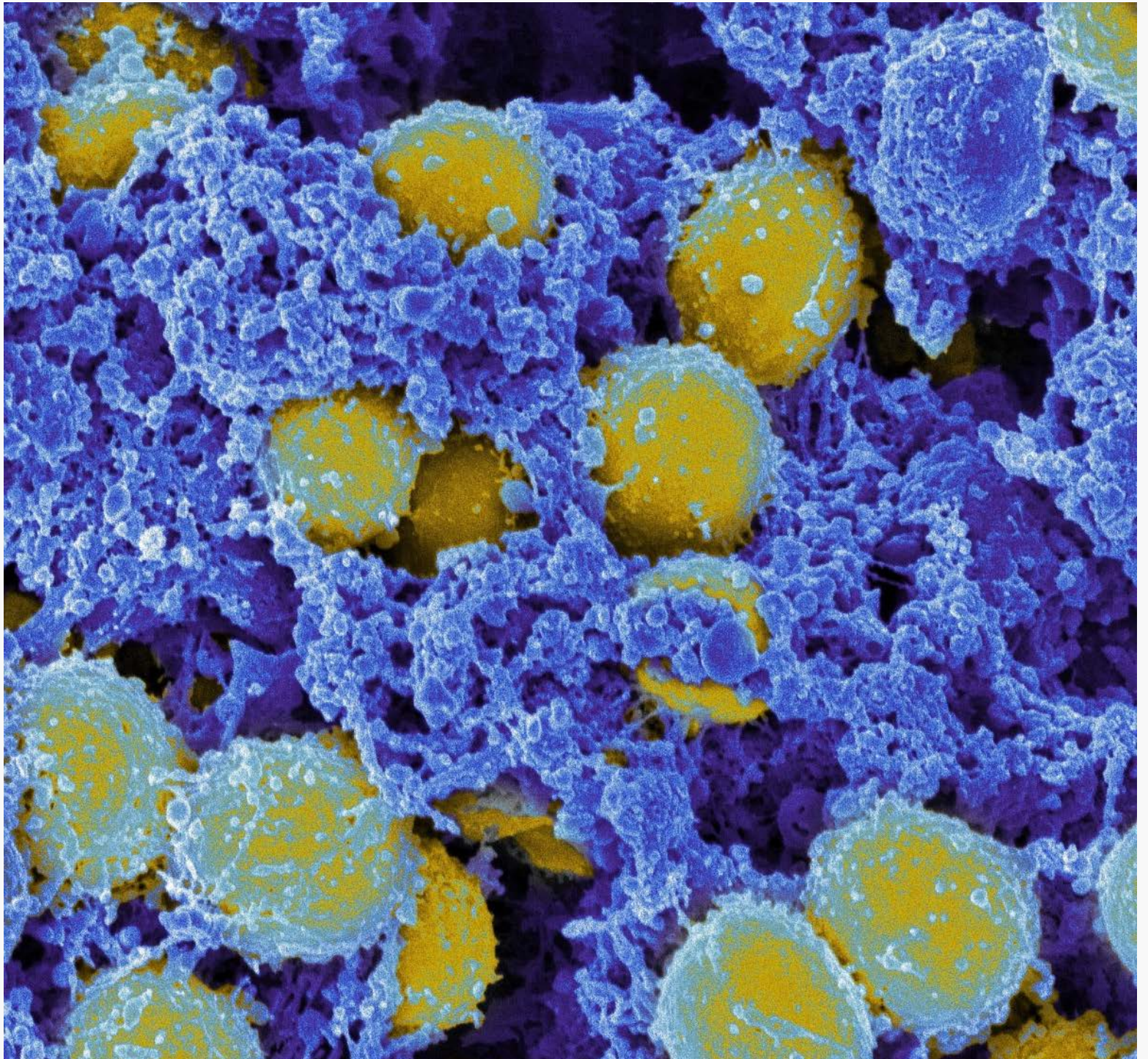
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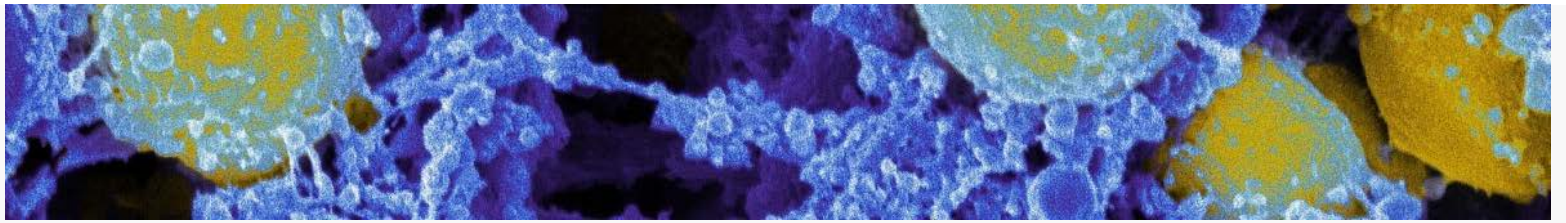
	<i>Staphylococcus aureus</i>
	<i>Streptococcus pneumoniae</i>
	<i>Klebsiella pneumoniae</i>
	<i>Pneumocystis jirovecii</i>
	<i>Mycoplasma pneumoniae</i>

Dashboard

Overall score: 0%

1 -





□ Question 45 of 200

□ □

A 67-year-old female patient presents to respiratory outpatients having been referred by her GP with increasing breathlessness. The referral letter mentions she has received 2 courses of antibiotics for chest infections in the last year and a 50 pack year smoking history. The patient complains of a productive cough with occasional streaks of blood but no history of weight loss. Her past medical history includes cardiac failure treated with enalapril, bisoprolol and furosemide, recurrent urinary tract infections treated with long-term nitrofurantoin and osteoarthritis treated with paracetamol and meptazinol. On examination, there is bilateral scattered coarse crepitations and finger clubbing.

Spirometry in clinic is as follows:

Forced vital capacity (FVC)	1.99L (72% predicted)
Forced expiratory volume in 1 second (FEV1)	1.20L (52% predicted)
FEV1/FVC ratio	0.60

What is the likely diagnosis?

	Bronchiectasis
	Chronic obstructive pulmonary disease
	Pulmonary fibrosis
	Squamous cell carcinoma
	Congestive cardiac failure

Dashboard

Overall score: 0%

1 -

□ Question 45 of 200

□ □

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What is the likely diagnosis?

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	Chronic obstructive pulmonary disease
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Dashboard

Overall score: **0%****1** -

Question 45 of 200



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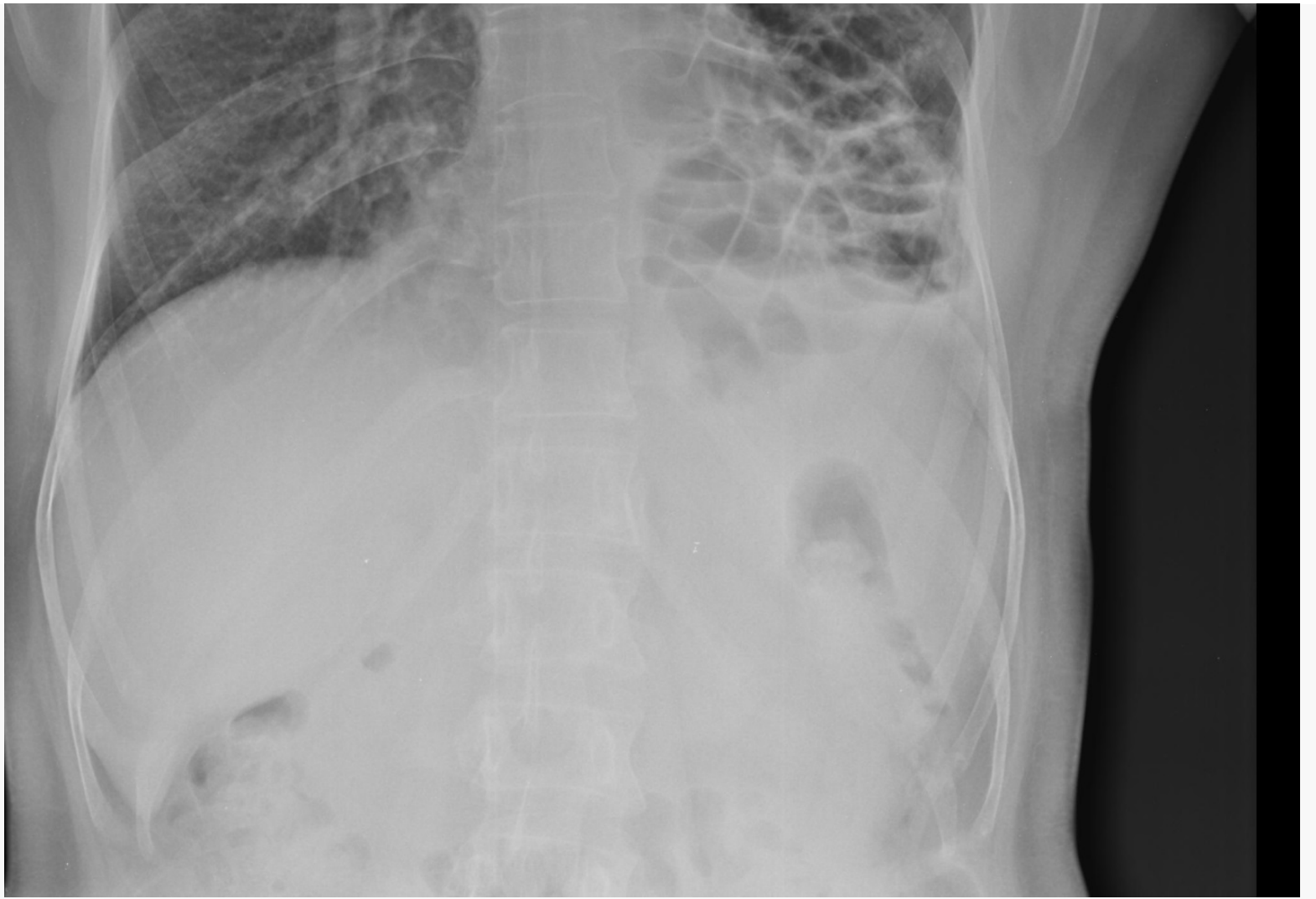
	Bronchiectasis
	Chronic obstructive pulmonary disease
	Pulmonary fibrosis
	Squamous cell carcinoma
	Congestive cardiac failure

Dashboard

Overall score: 0%

1 -





Question 45 of 200

A 67-year-old female patient presents to respiratory breathlessness. The referral letter mentions she has and a 50 pack year smoking history. The patient con no history of weight loss. Her past medical history in furosemide, recurrent urinary tract infections treated paracetamol and meptazinol. On examination, there

Spirometry in clinic is as follows:

Forced vital capacity (FVC)	1.99L
Forced expiratory volume in 1 second (FEV1)	1.20L
FEV1/FVC ratio	0.60



What is the likely diagnosis?

	Bronchiectasis
	Chronic obstructive pulmonary disease
	Pulmonary fibrosis
	Squamous cell carcinoma
	Congestive cardiac failure

Dashboard

Overall score: 0%

1 -

Question 46 of 200

A 59-year-old gentleman is brought in by ambulance to the emergency department with severe shortness of breath. He is unable to speak in full sentences or give much of a history. His partner explains that he has been coughing green phlegm for a week and started taking his rescue pack of steroids and antibiotics, but over the last 24 hours he has become more unwell with fevers and worsening chest tightness. He has a past medical history of COPD and hypertension and is normally on home inhalers but has never needed NIV, invasive ventilation, home nebulisers or home oxygen. The partner is unsure if he is known to be a carbon dioxide retainer.

He appears to be very unwell and is hypoxic and tachypnoeic. On auscultation, he sounds very wheezy throughout his chest. He has already been given IV steroids and IV antibiotics as well as controlled oxygen therapy via venturi mask at 24%. An arterial blood gas is done.

Arterial blood gas:

pH	7.25
pCO ₂	10.4kPa
pO ₂	8.9kPa
HCO ₃ ⁻	24mmol/l

What is the most appropriate immediate management plan?

<input type="checkbox"/>	CT chest
<input type="checkbox"/>	Immediate invasive ventilation
<input type="checkbox"/>	Immediate non-invasive ventilation
<input type="checkbox"/>	Medical management with nebulisers then if not improving start non-invasive ventilation
<input type="checkbox"/>	IV theophylline

Dashboard

Overall score: **0%**

1 -

Question 46 of 200



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pCO ₂	10.4kPa
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HCO ₃ ⁻	24mmol/l

What is the most appropriate immediate management plan?

	CT chest
	Immediate invasive ventilation
	Immediate non-invasive ventilation
	Medical management with nebulisers then if not improving start non-invasive ventilation
	IV theophylline

Dashboard

Overall score: **0%**

1 -

□ Question 47 of 200



A 23-year-old woman is referred by the emergency department with sudden onset shortness of breath and pleuritic chest pain. She describes no cough or sputum. The pain is constant and not worse on movement. She is 24 weeks pregnant with her third child. She is normally fit and well and on no regular medication beyond her pregnancy supplements. On examination, she is slightly tachypnoeic at 21/min but her sats are 98% on room air. Her blood pressure is 110/78 mmHg and her heart rate is 86/min. Her chest is clear and the JVP is not elevated and her heart sounds are normal. The emergency department registrar has sent several blood tests. The results are:

Hb	118 g/l
Platelets	$443 \times 10^9/l$
WBC	$9.8 \times 10^9/l$

Trop T	6ng/L (<14ng/L excludes cardiac damage)
D-dimer	1.3 mg/L (<0.5)
CRP 16	mg/L (<10)

Her chest x-ray is unremarkable.

Her ABG shows:

pH	7.39
pO ₂	8.6kPa
pCO ₂	2.9kPa
HCO ₃ ⁻	21mmol/L (22-29)
Sats	97%
BE	1.1

She is seen on the post take ward round and the Consultant would like to exclude a pulmonary embolism.

What is the most appropriate first investigation for this lady?

	Half dose CTPA
	V/Q scan
	USS Doppler of legs
	Full dose CTPA
	No need for investigation treat with LMWH

Dashboard

Overall score: 0%

1 -

□ Question 47 of 200



A 23-year-old woman is referred by the emergency department with sudden onset shortness of breath and pleuritic chest pain. She describes no cough or sputum. The pain is constant and not worse on movement. She is 24 weeks pregnant with her third child. She is normally fit and well and on no regular medication beyond her pregnancy supplements. On examination, she is slightly tachypnoeic at 21/min but her sats are 98% on room air. Her blood pressure is 110/78 mmHg and her heart rate is 86/min. Her chest is clear and the JVP is not elevated and her heart sounds are normal. The emergency department registrar has sent several blood tests. The results are:

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	USS Doppler of legs
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Dashboard

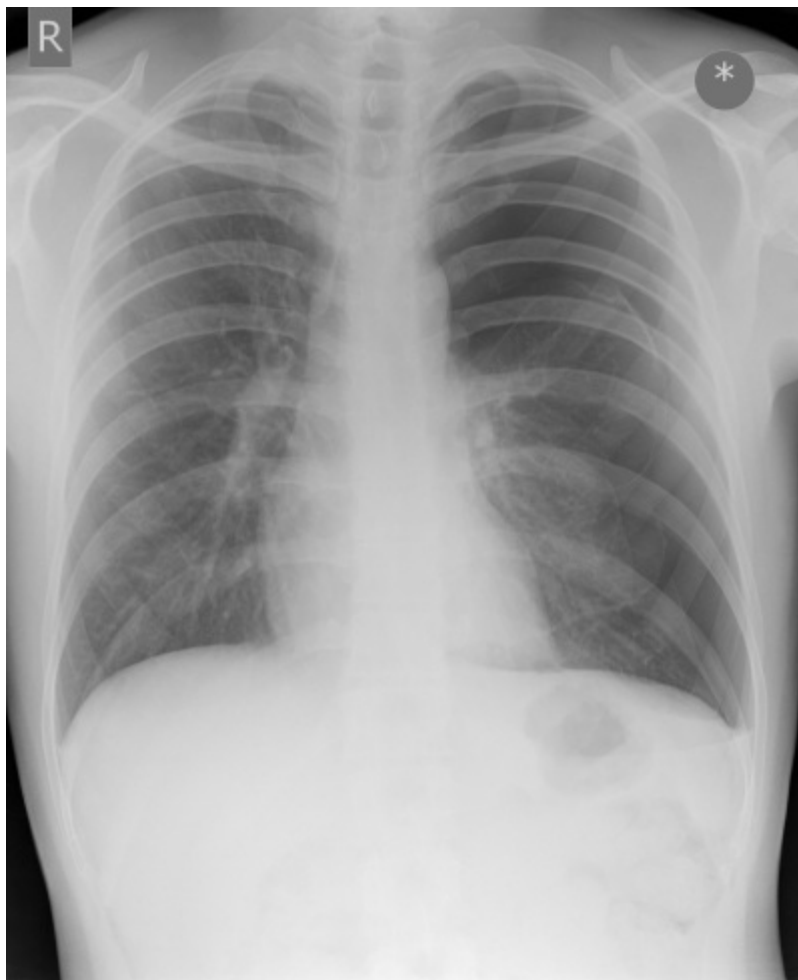
Overall score: 0%

1 -

□ Question 48 of 200

□ □

A 25-year-old man presents to the Emergency Department with a two-day history of dyspnoea. His pulse is 84/min, respiratory rate is 18/min and oxygen saturations are 97% on room air. The trachea is central on examination. You review his chest x-ray:



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What is the most likely clinical diagnosis?

	Left-sided pneumothorax (no tension)
	Normal
	Left-sided tension pneumothorax
	Hyperexpansion secondary to severe asthma
	Right middle lobe pneumonia

Dashboard

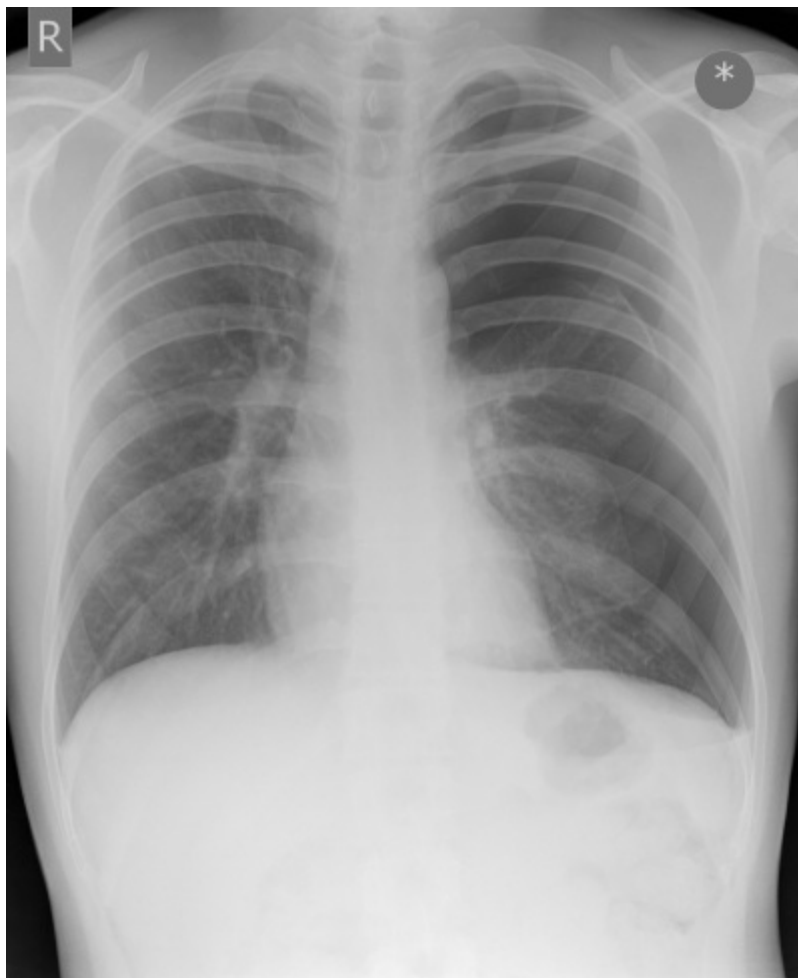
Overall score: **0%**

1 -

□ Question 48 of 200

□ □

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What is the most likely clinical diagnosis?

	Left-sided pneumothorax (no tension)
	Normal
	Left-sided tension pneumothorax
	Hyperexpansion secondary to severe asthma
	Right middle lobe pneumonia

Dashboard

Overall score: **0%**

1 -

Question 49 of 200

□ □

A 56-year-old teacher is referred to the respiratory clinic by his General Practitioner with a 4-month history of a cough. He has no medical history of note, is a non-smoker and takes no regular medications. The patient describes a dry nocturnal cough with no sputum or haemoptysis and no other associated symptoms.

On examination, the patient has a body mass index (BMI) of 30 kg/m². Cardiovascular, respiratory and abdominal examinations are unremarkable. A chest x-ray is normal and a Forced Expiratory Volume in 1 second to Forced Vital Capacity ratio (FEV1/FVC) is calculated to be 0.60.

Which of the following would you choose as your first line investigation?

	24 hour oesophageal pH monitoring and manometry
	Bronchoscopy
	Methacholine challenge
	Peak flow studies
	Sleep studies

Dashboard

Overall score: 0%

1 -

Question 49 of 200

□ □

A 56-year-old teacher is referred to the respiratory clinic by his General Practitioner with a 4-month history of a cough. He has no medical history of note, is a non-smoker and takes no regular medications. The patient describes a dry nocturnal cough with no sputum or haemoptysis and no other associated symptoms.

On examination, the patient has a body mass index (BMI) of 30 kg/m². Cardiovascular, respiratory and abdominal examinations are unremarkable. A chest x-ray is normal and a Forced Expiratory Volume in 1 second to Forced Vital Capacity ratio (FEV1/FVC) is calculated to be 0.60.

Which of the following would you choose as your first line investigation?

	24 hour oesophageal pH monitoring and manometry
	Bronchoscopy
	Methacholine challenge
	Peak flow studies
	Sleep studies

Dashboard

Overall score: **0%**

1 -

Question 50 of 200

□ □

A 67-year-old gentleman comes for review following a two-week-wait referral to the respiratory clinic. He is a current smoker with a 60 pack-year history. He has been suffering from a worsening cough and haemoptysis for the last month and has had a weight loss of 3kg over one month. On examination he looks cachectic, his fingers are clubbed and tar-stained. His wrists are tender. His chest shows reduced expansion on the right side with reduced breath sounds and dullness. What is the wrist tenderness likely to indicate?

	Osteoarthritis
	Osteoporosis
	Osteopenia
	Paraneoplastic rheumatoid-like disease
	Hypertrophic pulmonary osteoarthropathy

Dashboard

Overall score: 0%

1 -

□ Question 50 of 200

□ □

A 67-year-old gentleman comes for review following a two-week-wait referral to the respiratory clinic. He is a current smoker with a 60 pack-year history. He has been suffering from a worsening cough and haemoptysis for the last month and has had a weight loss of 3kg over one month. On examination he looks cachectic, his fingers are clubbed and tar-stained. His wrists are tender. His chest shows reduced expansion on the right side with reduced breath sounds and dullness. What is the wrist tenderness likely to indicate?

	Osteoarthritis
	Osteoporosis
	Osteopenia
	Paraneoplastic rheumatoid-like disease
	Hypertrophic pulmonary osteoarthropathy

Dashboard

Overall score: **0%****1** -

Question 50 of 200

□ □

A 67-year-old gentleman comes for review following a two-week-wait referral to the respiratory clinic. He is a current smoker with a 60 pack-year history. He has been suffering from a worsening cough and haemoptysis for the last month and has had a weight loss of 3kg over one month. On examination he looks cachectic, his fingers are clubbed and tar-stained. His wrists are tender. His chest shows reduced expansion on the right side with reduced breath sounds and dullness. What is the wrist tenderness likely to indicate?

	Osteoarthritis
	Osteoporosis
	Osteopenia
	Paraneoplastic rheumatoid-like disease
	Hypertrophic pulmonary osteoarthropathy

Dashboard

Overall score: **0%**

1 -



□ Question 51 of 200

□ □

A 52-year-old gentleman presents to the respiratory clinic with shortness of breath and a dry cough. He has noticed his symptoms getting progressively worse over months. He has a past medical history of hypertension and depression. He takes only ramipril and has no allergies. On examination, he has bilateral inspiratory crackles at both lung bases. A chest X-ray demonstrates extensive pleural plaques. He has worked as an electrician 20 years ago and believes that he may have had asbestos exposure. A diagnosis of asbestosis with extensive pleural plaques is suspected. What is his pulmonary function tests likely to show?

	FEV1 to FVC ratio >0.7
	FEV1 to FVC ratio <0.7
	Normal ratio of FEV1 to FVC and normal FEV1
	FEV1 to FVC ratio <0.7 but improves with inhaled steroids
	FEV1 to FVC ratio <0.7 but improves with inhaled salbutamol

Dashboard

Overall score: 0%

1 -

□ Question 51 of 200

□ □

A 52-year-old gentleman presents to the respiratory clinic with shortness of breath and a dry cough. He has noticed his symptoms getting progressively worse over months. He has a past medical history of hypertension and depression. He takes only ramipril and has no allergies. On examination, he has bilateral inspiratory crackles at both lung bases. A chest X-ray demonstrates extensive pleural plaques. He has worked as an electrician 20 years ago and believes that he may have had asbestos exposure. A diagnosis of asbestosis with extensive pleural plaques is suspected. What is his pulmonary function tests likely to show?

	FEV1 to FVC ratio >0.7
	FEV1 to FVC ratio <0.7
	Normal ratio of FEV1 to FVC and normal FEV1
	FEV1 to FVC ratio <0.7 but improves with inhaled steroids
	FEV1 to FVC ratio <0.7 but improves with inhaled salbutamol

Dashboard

Overall score: **0%****1** -

□ Question 52 of 200

□ □

A 60-year-old male is admitted to hospital under the medical team with breathlessness. The patient is able to give a history of rapid onset breathlessness this afternoon, with no associated chest pain. He has recently started an ACE inhibitor for hypertension. On examination, there are bilateral crepitations to the mid-zones. There are no added heart sounds. The patient is tachypnoeic and saturations are 90% on room air. Urinalysis is negative. A chest X-Ray demonstrates acute pulmonary oedema. An ECG shows sinus rhythm with a rate of 95. Blood results show:

Na ⁺	135 mmol/l
K ⁺	5.1 mmol/l
Urea	12.6 mmol/l
Creatinine	188 µmol/l

Which investigation will confirm the most likely underlying diagnosis?

	Magnetic Resonance (MR) Renal Angiography
	Computed Tomography (CT) Pulmonary Angiography
	Coronary Angiography
	Echocardiography
	High Resolution Computed Tomography (HRCT)

Dashboard

Overall score: 0%

1 -

□ Question 52 of 200

□ □

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Dashboard

Overall score: **0%****1** -

Question 52 of 200



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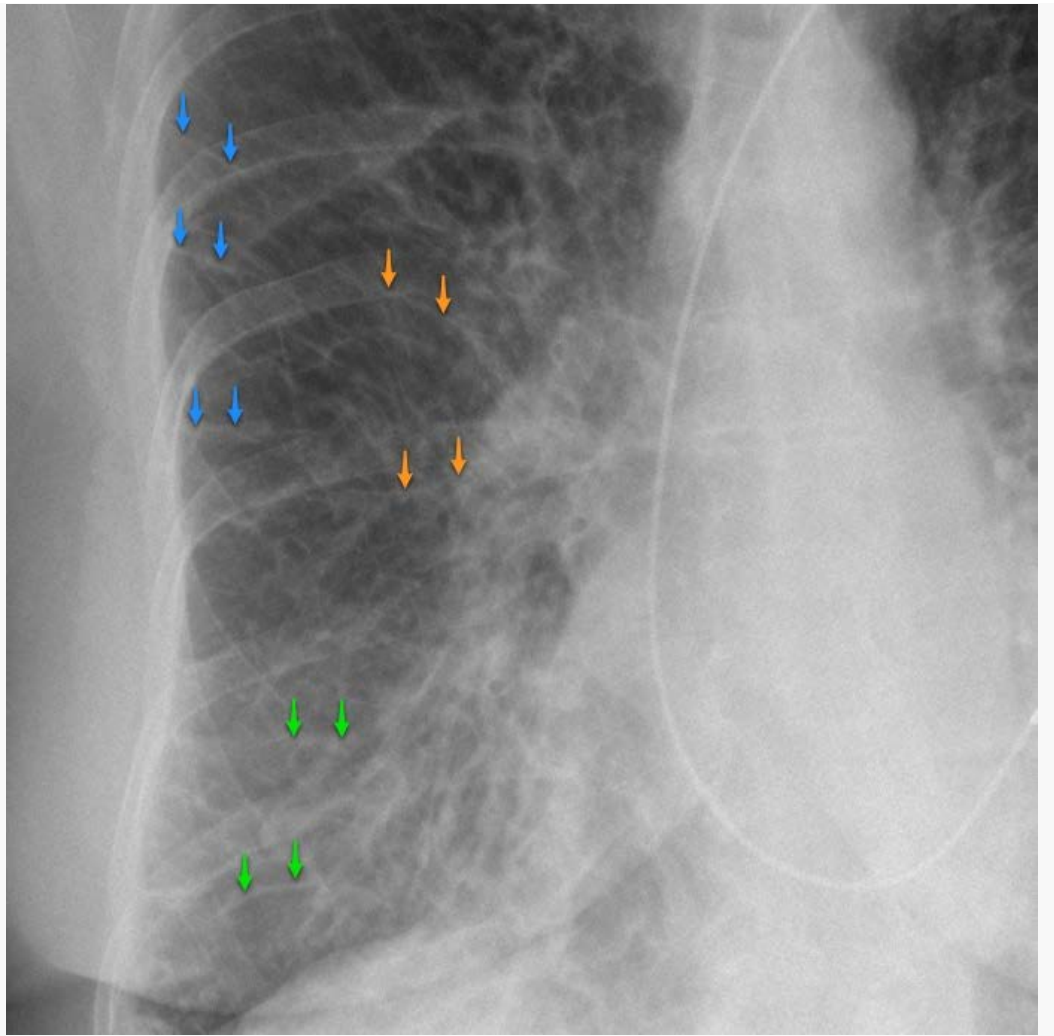
Which investigation will confirm the most likely underlying diagnosis?

	Magnetic Resonance (MR) Renal Angiography
	Computed Tomography (CT) Pulmonary Angiography
	Coronary Angiography
	Echocardiography
	High Resolution Computed Tomography (HRCT)

Dashboard

Overall score: 0%

1 -



□ Question 53 of 200

□ □

A 63-year-old retired car mechanic is referred to the respiratory clinic by his GP due to progressive dyspnoea and low oxygen saturations. The GP had performed an ECG and BNP level, both of which were within normal limits.

The dyspnoea had been getting progressively worse for the past 2 years and is now limiting his daily activities. He also describes a dry cough which is worse after walking. There is no history of chest pain, On examination there is no clubbing, pulse is 84/min, respiratory rate 18/min and oxygen saturations are 91% on room air.

An x-ray is requested:





What is the most likely diagnosis

	Sarcoidosis
	Extrinsic allergic alveolitis
	Silicosis
	Bronchiectasis
	Idiopathic pulmonary fibrosis

Dashboard

Overall score: **0%**

1 -

□ Question 53 of 200

□ □

A 63-year-old retired car mechanic is referred to the respiratory clinic by his GP due to progressive dyspnoea and low oxygen saturations. The GP had performed an ECG and BNP level, both of which were within normal limits.

The dyspnoea had been getting progressively worse for the past 2 years and is now limiting his daily activities. He also describes a dry cough which is worse after walking. There is no history of chest pain, On examination there is no clubbing, pulse is 84/min, respiratory rate 18/min and oxygen saturations are 91% on room air.

An x-ray is requested:





What is the most likely diagnosis

	Sarcoidosis
	Extrinsic allergic alveolitis
	Silicosis
	Bronchiectasis
	Idiopathic pulmonary fibrosis

Dashboard

Overall score: **0%**

1 -

□ Question 53 of 200



A 63-year-old retired car mechanic is referred to the respiratory clinic by his GP due to progressive dyspnoea and low oxygen saturations. The GP had performed an ECG and BNP level, both of which were within normal limits.

The dyspnoea had been getting progressively worse for the past 2 years and is now limiting his daily activities. He also describes a dry cough which is worse after walking. There is no history of chest pain, On examination there is no clubbing, pulse is 84/min, respiratory rate 18/min and oxygen saturations are 91% on room air.

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What is the most likely diagnosis

	Sarcoidosis
	Extrinsic allergic alveolitis
	Silicosis
	Bronchiectasis
	Idiopathic pulmonary fibrosis

Dashboard

Overall score: **0%**

1 -







□ Question 53 of 200

□ □

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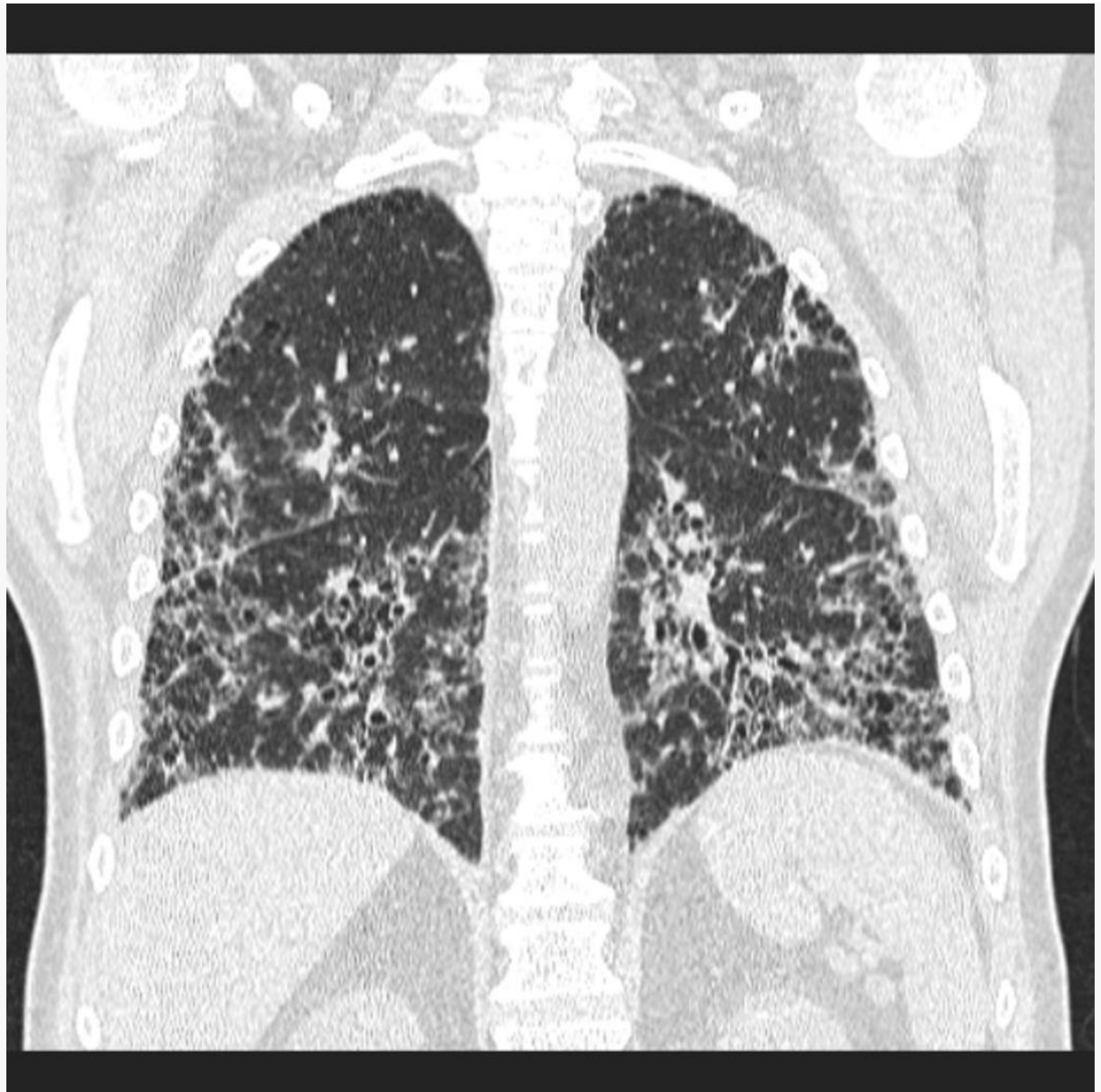
What is the most likely diagnosis

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	Extrinsic allergic alveolitis
	Silicosis
	Bronchiectasis
	Idiopathic pulmonary fibrosis

Dashboard

Overall score: **0%**

1 -

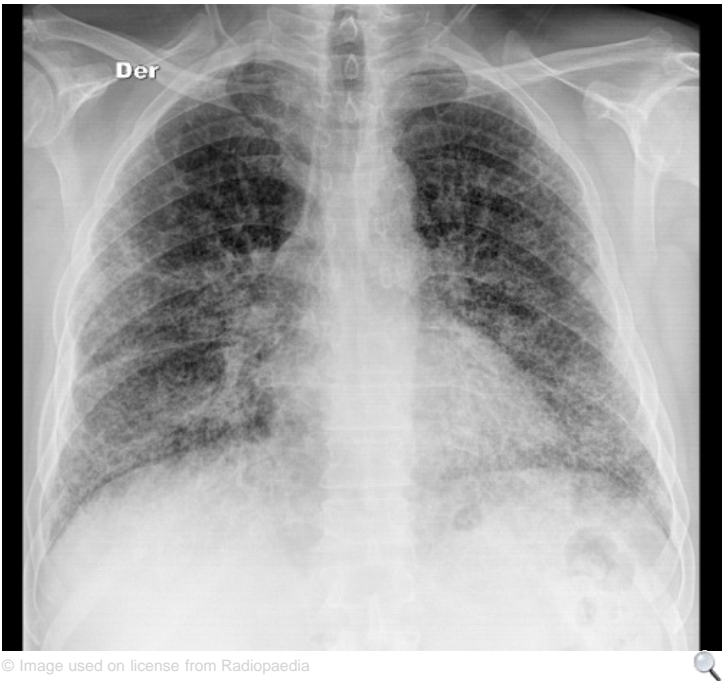


Question 53 of 200

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What is the most likely diagnosis

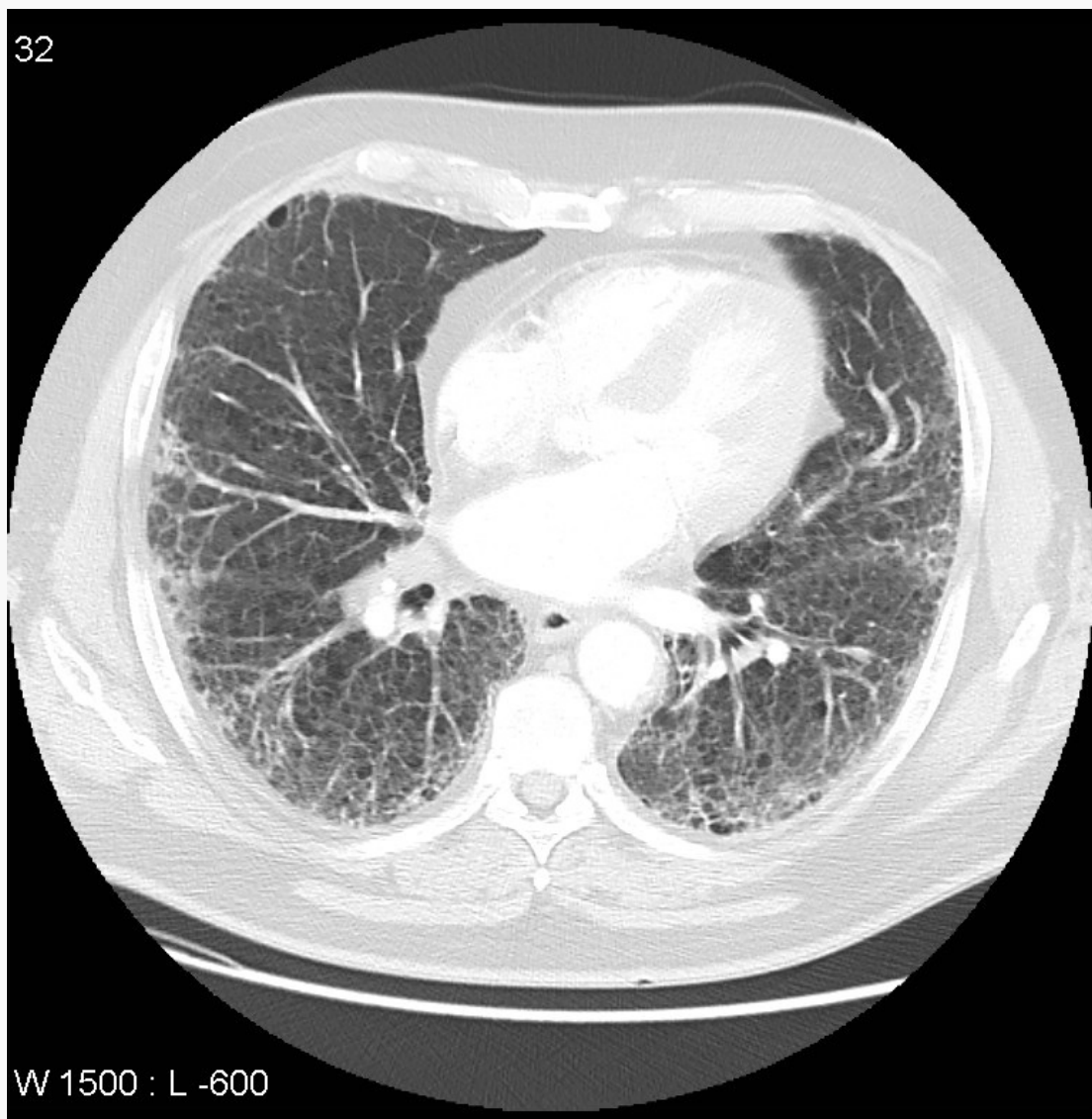
	Sarcoidosis
	Extrinsic allergic alveolitis
	Silicosis
	Bronchiectasis
	Idiopathic pulmonary fibrosis

Dashboard

Overall score: 0%

1 -

32



W 1500 : L -600

Question 54 of 200

□ □

A 69-year-old man from Pakistan presents to his general practitioner with a three month history of cough associated with episodes of haemoptysis and has had some episodes of shortness of breath. His only past medical history of note is asthma for which he takes salbutamol inhaler as required and 2 puffs of beclomethasone inhaler twice daily. He has a 25 pack-year history and he is teetotal. The patient's GP performs blood tests and refers the patient to the rapid access chest clinic.

Blood test results come back as all within normal reference ranges, however, chest x-ray shows a solid lesion at the apex of the right lung, that is associated with a rim of air.

Of the following options, which is the most likely diagnosis?

	Tuberculosis
	Mesothelioma
	Aspergilloma
	Squamous cell carcinoma
	Small cell lung carcinoma

Dashboard

Overall score: 0%

1 -

Question 54 of 200

□ □

A 69-year-old man from Pakistan presents to his general practitioner with a three month history of cough associated with episodes of haemoptysis and has had some episodes of shortness of breath. His only past medical history of note is asthma for which he takes salbutamol inhaler as required and 2 puffs of beclomethasone inhaler twice daily. He has a 25 pack-year history and he is teetotal. The patient's GP performs blood tests and refers the patient to the rapid access chest clinic.

Blood test results come back as all within normal reference ranges, however, chest x-ray shows a solid lesion at the apex of the right lung, that is associated with a rim of air.

Of the following options, which is the most likely diagnosis?

	Tuberculosis
	Mesothelioma
	Aspergilloma
	Squamous cell carcinoma
	Small cell lung carcinoma

Dashboard

Overall score: **0%**

1 -

□ Question 55 of 200

□ □

A 71-year-old retired bus driver is referred to the respiratory fast-track clinic. He saw his GP after 2 months of right-sided chest pain and cough. He received a course of amoxicillin with some improvement in the cough and chest pain but has since started getting short of breath when just walking around the house. He is an ex-smoker of 30 pack-years.

On assessment, he has dullness to percussion and reduced air entry on the right lung base. His saturations are 96% on air. Chest x-ray confirms a right pleural effusion. Pleural ultrasound shows a moderate sized simple effusion. A pleural aspirate is performed:

Appearance	Serosanguineous
pH	7.32
Protein	45 g/l
LDH	450 IU/l
Glucose	4.0mmol/l
Gram stain	No organisms or malignant cells seen
Culture	No growth

Given the clinical scenario and results so far, what is the next best step for investigation of this patient?

	Surgical VATS for pleural biopsy
	CT thorax with contrast
	Further course of antibiotics
	Intercostal drain
	Observe and repeat chest x-ray and pleural ultrasound in 4 weeks

Dashboard

Overall score: **0%**

1 -

□ Question 55 of 200

□ □

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	Surgical VATS for pleural biopsy
	CT thorax with contrast
	Further course of antibiotics
	Intercostal drain
	Observe and repeat chest x-ray and pleural ultrasound in 4 weeks

Dashboard

Overall score: **0%**

1 -

□ Question 56 of 200

□ □

A 58-year-old man presents to the emergency department with a three-day history of sharp chest pain. He denies any shortness of breath. His pain is worse on deep inspiration and has not improved with paracetamol. He has no other symptoms. He has a past medical history of COPD and uses regular combination inhalers with salbutamol inhalers when he becomes short of breath. He has not recently had an exacerbation and he has never been admitted to ITU or had invasive ventilation. Examination demonstrates no abnormalities; the chest is clear on auscultation and vital parameters are within normal range. A chest X-ray demonstrates a <1cm right-sided pneumothorax. He is treated with high flow oxygen. What is the benefit of oxygen in the treatment of a pneumothorax?

	Maintaining pressure inside alveoli to prevent further expansion of pneumothorax
	Exchange of nitrogen for oxygen allowing quicker resorption of the pneumothorax
	Prophylactic treatment if suddenly becomes hypoxic
	There is no indication for oxygen
	Symptomatic relief

Dashboard

Overall score: 0%

1 -

□ Question 56 of 200

□ □

A 58-year-old man presents to the emergency department with a three-day history of sharp chest pain. He denies any shortness of breath. His pain is worse on deep inspiration and has not improved with paracetamol. He has no other symptoms. He has a past medical history of COPD and uses regular combination inhalers with salbutamol inhalers when he becomes short of breath. He has not recently had an exacerbation and he has never been admitted to ITU or had invasive ventilation. Examination demonstrates no abnormalities; the chest is clear on auscultation and vital parameters are within normal range. A chest X-ray demonstrates a <1cm right-sided pneumothorax. He is treated with high flow oxygen. What is the benefit of oxygen in the treatment of a pneumothorax?

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	Exchange of nitrogen for oxygen allowing quicker resorption of the pneumothorax
	Prophylactic treatment if suddenly becomes hypoxic
	There is no indication for oxygen
	Symptomatic relief

Dashboard

Overall score: **0%****1** -

□ Question 57 of 200

□ □

A 79-year-old man is seen in the respiratory clinic after being referred by his GP. He is has been getting progressively more short-of-breath for the past 2 years and now struggles to climb the stairs at home.

He gave up smoking 5 years ago after having a 50-pack-year history. He drinks around 20 units of alcohol per week and is a retired coal miner.

On auscultation he has scattered fine crackles, predominately in the upper zones. Oxygen saturations on room air are 91%. Spirometry shows the following;

FEV1	1.4 L (predicted 3.8 L)
FVC	1.7 L (predicted 4.5 L)
FEV1/FVC	82% (normal > 75%)

A chest x-ray is requested:



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What is the most likely diagnosis?

<input type="radio"/>	Histiocytosis
<input type="radio"/>	Chronic obstructive pulmonary disease
<input type="radio"/>	Idiopathic pulmonary fibrosis
<input type="radio"/>	Silicosis
<input type="radio"/>	Hypersensitivity pneumonitis

Dashboard

Overall score: **0%**

1 -

□ Question 57 of 200

□ □

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He gave up smoking 5 years ago after having a 50-pack-year history. He drinks around 20 units of alcohol per week and is a retired coal miner.

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A chest x-ray is requested:



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What is the most likely diagnosis?

	Histiocytosis
	Chronic obstructive pulmonary disease
	Idiopathic pulmonary fibrosis
	Silicosis
	Hypersensitivity pneumonitis

Dashboard

Overall score: **0%**

1 -

□ Question 57 of 200

□ □

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FEV1/FVC	82% (normal > 75%)

A chest x-ray is requested:



© Image used on license from Radiopaedia



What is the most likely diagnosis?

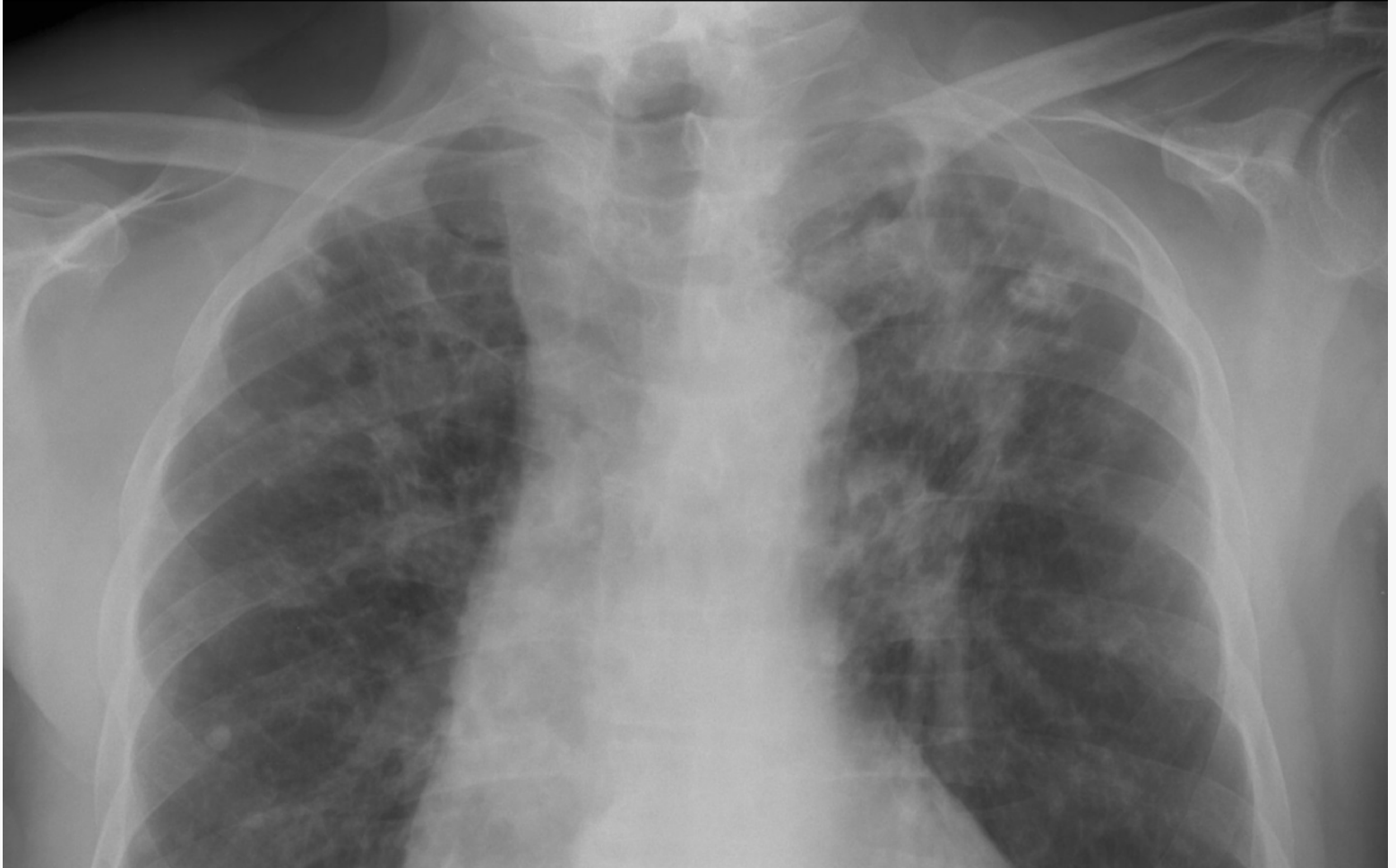
	Histiocytosis
	Chronic obstructive pulmonary disease
	Idiopathic pulmonary fibrosis
	Silicosis
	Hypersensitivity pneumonitis

Dashboard

Overall score: **0%**

1 -

2





W 2428 : L 2707

Question 57 of 200

□ □

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FVC	1.7 L (predicted 4.5 L)
FEV1/FVC	82% (normal > 75%)

A chest x-ray is requested:



© Image used on license from Radiopaedia

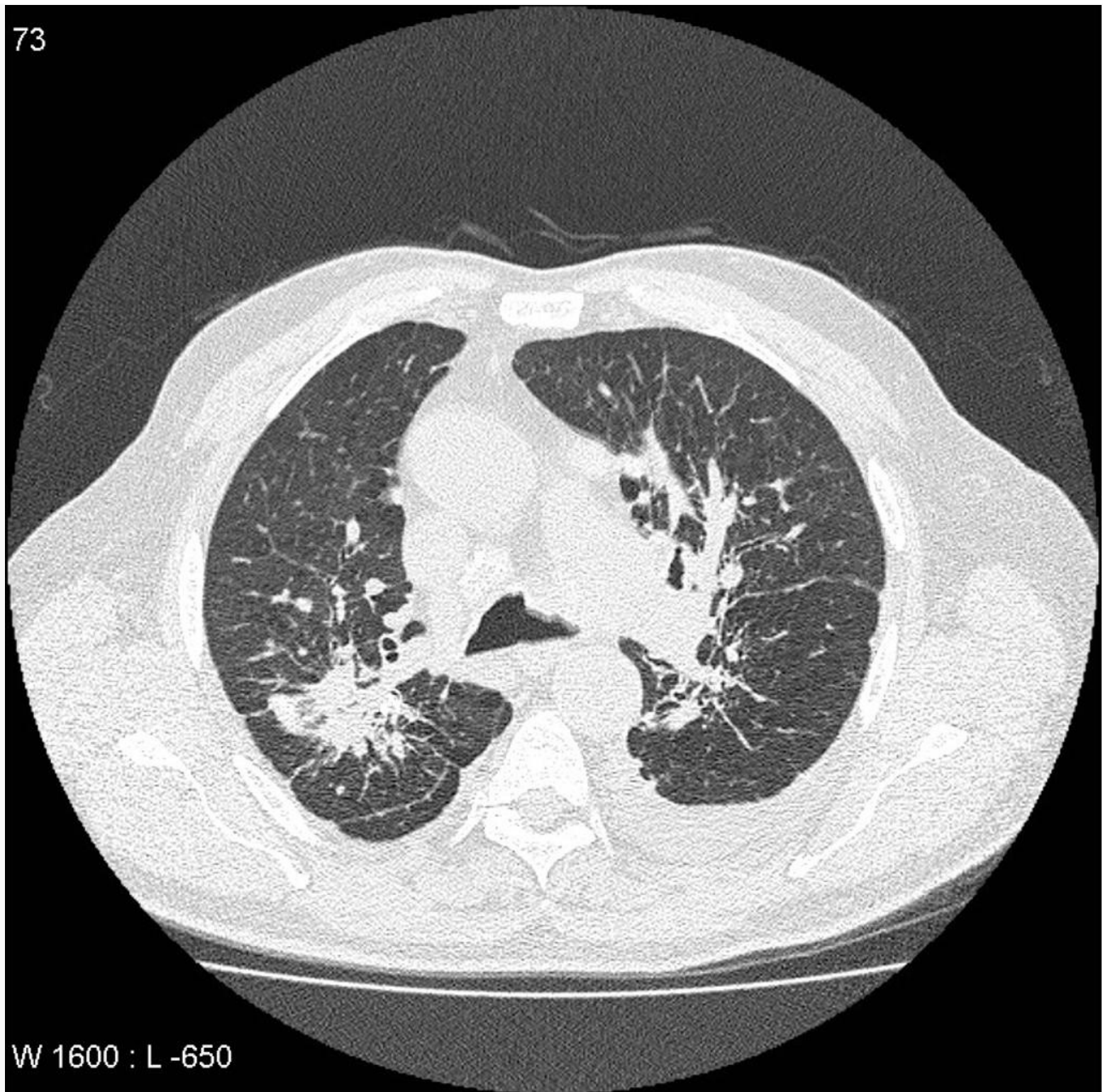
What is the most likely diagnosis?

	Histiocytosis
	Chronic obstructive pulmonary disease
	Idiopathic pulmonary fibrosis
	Silicosis
	Hypersensitivity pneumonitis

Dashboard

Overall score: **0%**

1 -



□ Question 58 of 200

□ □

A 23-year-old man presents to the emergency department with shortness of breath, fever and a cough. He has been having a non-productive cough for two weeks. Prior to this, he felt had felt unwell with muscle aches and malaise. He went to his GP and was given amoxicillin but this has made no difference and now he is feeling more breathless and unwell. He travelled to Belgium one month ago but apart from that has not been outside of the UK. He has no other medical problems and takes no regular medications. His cough is non-productive and comes in paroxysms which make him concerned.

On examination, there are a few bilateral crepitations but the examination is otherwise normal. His observations show fever and mild hypoxia. Blood tests show mild anaemia and raised inflammatory markers. A chest X-ray shows bilateral consolidation, but he improves with IV co-amoxiclav and clarithromycin over a few days. What is the most likely causative organism?

	Klebsiella pneumoniae
	Legionella pneumophila
	Mycoplasma pneumoniae
	Chlamydia psittaci
	Coxiella burnetii

Dashboard

Overall score: 0%

1 -

Question 58 of 200

□ □

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	Legionella pneumophila
	Mycoplasma pneumoniae
	Chlamydia psittaci
	Coxiella burnetii

Dashboard

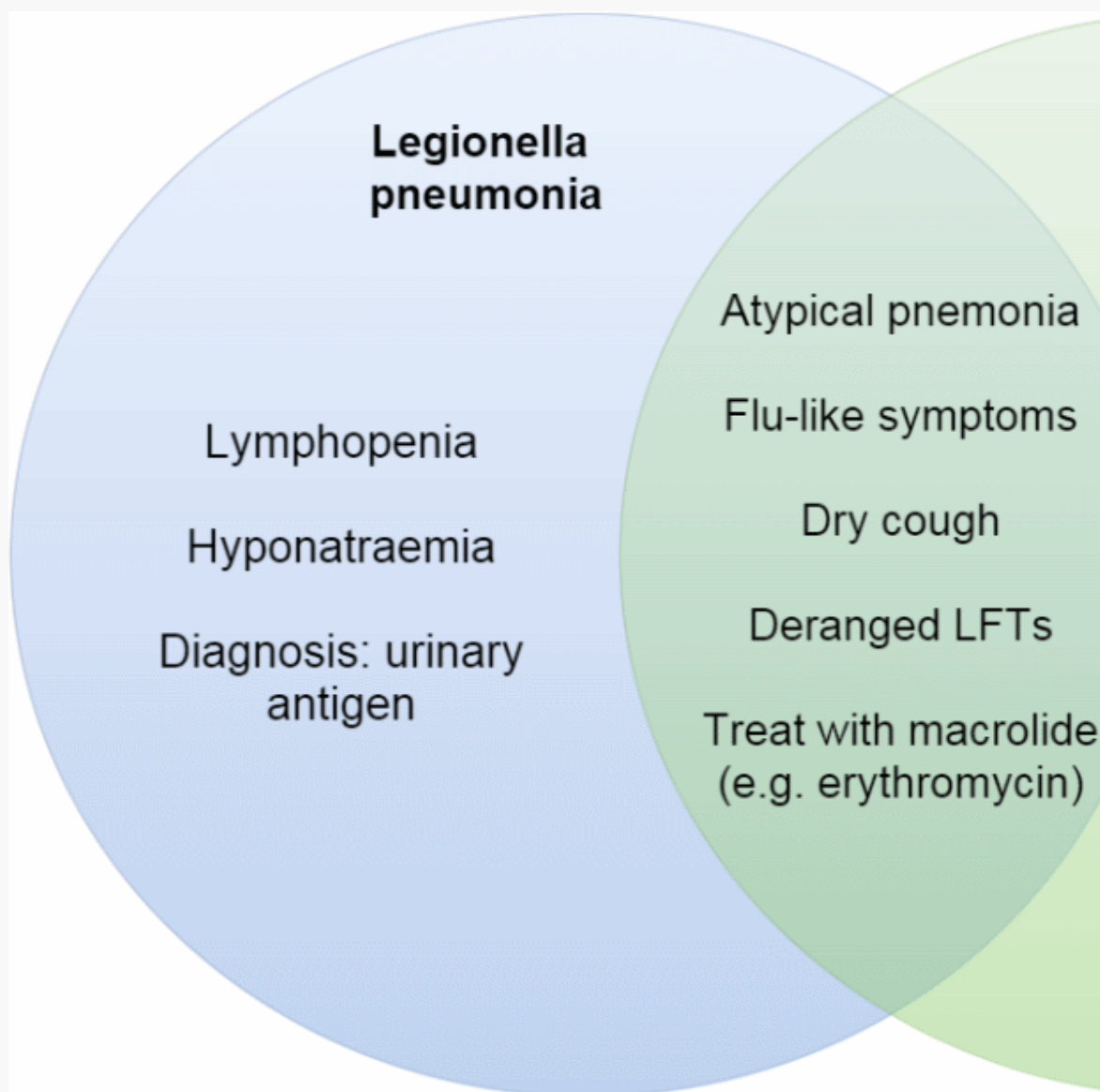
Overall score: **0%**

1 -

Question 58 of 200

A 23-year-old man presents having a non-productive cough. He went to his GP and was given antibiotics but remains unwell. He travelled to Belgium 2 weeks ago for medical problems and takes no regular medication. He is now very concerned.

On examination, there are no crackles, no wheezes, no fever and mild hypoxia. Blood tests show lymphopenia and hyponatraemia. CXR shows consolidation in the right lower lobe. What is the most likely causative organism?



<input type="radio"/>	Klebsiella pneumoniae
<input type="radio"/>	Legionella pneumophila
<input type="radio"/>	Mycoplasma pneumoniae
<input type="radio"/>	Chlamydia psittaci
<input type="radio"/>	Coxiella burnetii

Dashboard

Overall score: 0%

1 -

Question 59 of 200

□ □

A 60-year-old man comes to his GP complaining of cough and dyspnoea on exertion. He has had the cough for over 2 years, but it has gotten worse recently along with increasing shortness of breath. He has no haemoptysis, chest pain or leg swelling. The patient has a 60 pack-year smoking history and drinks a moderate amount of alcohol. His temperature is 37.2°C, blood pressure is 140/80 mmHg, pulse is 80/min, and respirations are 20/min.

Chest x-ray shows prominent bronchovascular markings and mild diaphragmatic flattening.
Pulmonary function test results are as follows:

Forced expiratory volume in 1 second	67% of predicted
Forced vital capacity	95% of predicted
FEV1/FVC ratio	0.65

Carbon monoxide diffusion capacity is 100% of predicted value.

Which of the following is the most likely cause of this patients symptoms?

	Asbestosis
	Chronic bronchitis
	Panacinar emphysema
	Pulmonary fibrosis
	Rheumatoid lung

Dashboard

Overall score: 0%

□ Question 59 of 200

□ □

A 60-year-old man comes to his GP complaining of cough and dyspnoea on exertion. He has had the cough for over 2 years, but it has gotten worse recently along with increasing shortness of breath. He has no haemoptysis, chest pain or leg swelling. The patient has a 60 pack-year smoking history and drinks a moderate amount of alcohol. His temperature is 37.2°C, blood pressure is 140/80 mmHg, pulse is 80/min, and respirations are 20/min.

Chest x-ray shows prominent bronchovascular markings and mild diaphragmatic flattening.
Pulmonary function test results are as follows:

Forced expiratory volume in 1 second	67% of predicted
Forced vital capacity	95% of predicted
FEV1/FVC ratio	0.65

Carbon monoxide diffusion capacity is 100% of predicted value.

Which of the following is the most likely cause of this patients symptoms?

	Asbestosis
	Chronic bronchitis
	Panacinar emphysema
	Pulmonary fibrosis
	Rheumatoid lung

Dashboard

Overall score: **0%**

Question 60 of 200

□ □

A 66-year-old man, presented with two episodes of mild haemoptysis in the past 3 months. He also had lost 5 kilograms of weight in the past 3 months. He was a smoker with 50 pack years history and a social drinker. He was actively mobile and had no significant past medical history.

Clinical examination revealed no abnormality except clubbing.

A contrast enhanced CT chest showed a 4 cm mass in the right upper lobe periphery close to the chest wall and enlarged right hilar (2 cm) and subcarinal (2 cm) lymph nodes. A positron emission tomography (PET) scan was done which showed a standard uptake value (SUV) max of 20 for the lung mass. The ipsilateral hilar and subcarinal lymph nodes were also found to be FDG (fluorodeoxyglucose) avid. There was no evidence of distant metastasis.

What is the next appropriate step in the management?

	CT guided biopsy of the lung mass
	Ultrasound guided biopsy of the lung mass
	Flexible bronchoscopic biopsy of the lung mass
	Endobronchial ultrasound (EBUS) guided mediastinal lymph node sampling
	Video-Assisted Thoracoscopic Surgery (VATS) biopsy of the mediastinal lymph nodes

Dashboard

Overall score: 0%

1 -

□ Question 60 of 200

□ □

A 66-year-old man, presented with two episodes of mild haemoptysis in the past 3 months. He also had lost 5 kilograms of weight in the past 3 months. He was a smoker with 50 pack years history and a social drinker. He was actively mobile and had no significant past medical history.

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	Ultrasound guided biopsy of the lung mass
	Flexible bronchoscopic biopsy of the lung mass
	Endobronchial ultrasound (EBUS) guided mediastinal lymph node sampling
	Video-Assisted Thoracoscopic Surgery (VATS) biopsy of the mediastinal lymph nodes

Dashboard

Overall score: 0%

1 -

□ Question 61 of 200

□ □

An 83-year-old female presents to A&E with a four day history of increasing shortness of breath and worsening of a chronic productive cough. She speaks no English but you know from her medical records that she recently emigrated from rural India to live with her family two years ago. She has no diagnosed underlying lung condition. On examination, she has bilateral expiratory wheeze and hyperexpanded lungs with no clear inspiratory crackles. Heart sounds appear normal and mild bilateral pitting oedema. Her saturation measures 88% on air via pulse oxymeter, respiratory rate is 24 to 28 per minute. Her chest radiograph is hyperexpanded with mild bibasal fibrotic changes but demonstrates no focal signs of consolidation. She has no smoking or alcohol history. Her blood tests are as follows:

Hb	15.0 g/dl
Platelets	211 * 10 ⁹ /l
WBC	11.4 * 10 ⁹ /l
Neutrophils	9.5 * 10 ⁹ /l

Urea	8.4 mmol/l
Creatinine	112 µmol/l
CRP	37 mg/l

What is the most likely diagnosis?

	Exacerbation of congestive cardiac failure
	Infective exacerbation COPD
	Community acquired pneumonia
	Tuberculosis
	Progression of pulmonary fibrosis

Dashboard

Overall score: **0%**

1 -

□ Question 61 of 200



An 83-year-old female presents to A&E with a four day history of increasing shortness of breath and worsening of a chronic productive cough. She speaks no English but you know from her medical records that she recently emigrated from rural India to live with her family two years ago. She has no diagnosed underlying lung condition. On examination, she has bilateral expiratory wheeze and hyperexpanded lungs with no clear inspiratory crackles. Heart sounds appear normal and mild bilateral pitting oedema. Her saturation measures 88% on air via pulse oxymeter, respiratory rate is 24 to 28 per minute. Her chest radiograph is hyperexpanded with mild bibasal fibrotic changes but demonstrates no focal signs of consolidation. She has no smoking or alcohol history. Her blood tests are as follows:

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What is the most likely diagnosis?

	Exacerbation of congestive cardiac failure
	Infective exacerbation COPD
	Community acquired pneumonia
	Tuberculosis
	Progression of pulmonary fibrosis

Dashboard

Overall score: **0%**

1 -

□ Question 62 of 200

□ □

A previously well 28-year-old man presents with shortness of breath and abdominal discomfort. He reports a dry cough for the previous 10 days. He works full time as a management consultant. He is a non-smoker and drinks approximately 20 units of alcohol a week. He went on a stag-do to Prague with a bunch of friends 2 weeks ago. In the last few days, he has noticed a widespread skin rash which he describes as lots of pink rings around a pale centre.

Bloods on admission:

Na ⁺	128 mmol/l
K ⁺	3.7 mmol/l
Urea	8.2 mmol/l
Creatinine	150 µmol/l

Chest x-ray: Diffuse reticular infiltrates and small right-sided pleural effusion.

What is the most likely causative organism?

	<i>Staphylococcus aureus</i>
	<i>Pneumocystis jirovecii</i>
	<i>Mycoplasma pneumoniae</i>
	<i>Streptococcus pneumoniae</i>
	<i>Haemophilus influenzae</i>

Overall score: **0%**

1 -

□ Question 62 of 200

□ □

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	<i>Mycoplasma pneumoniae</i>
	<i>Streptococcus pneumoniae</i>
	<i>Haemophilus influenzae</i>

[Dashboard](#)

Overall score: **0%**

1 -

Question 62 of 200

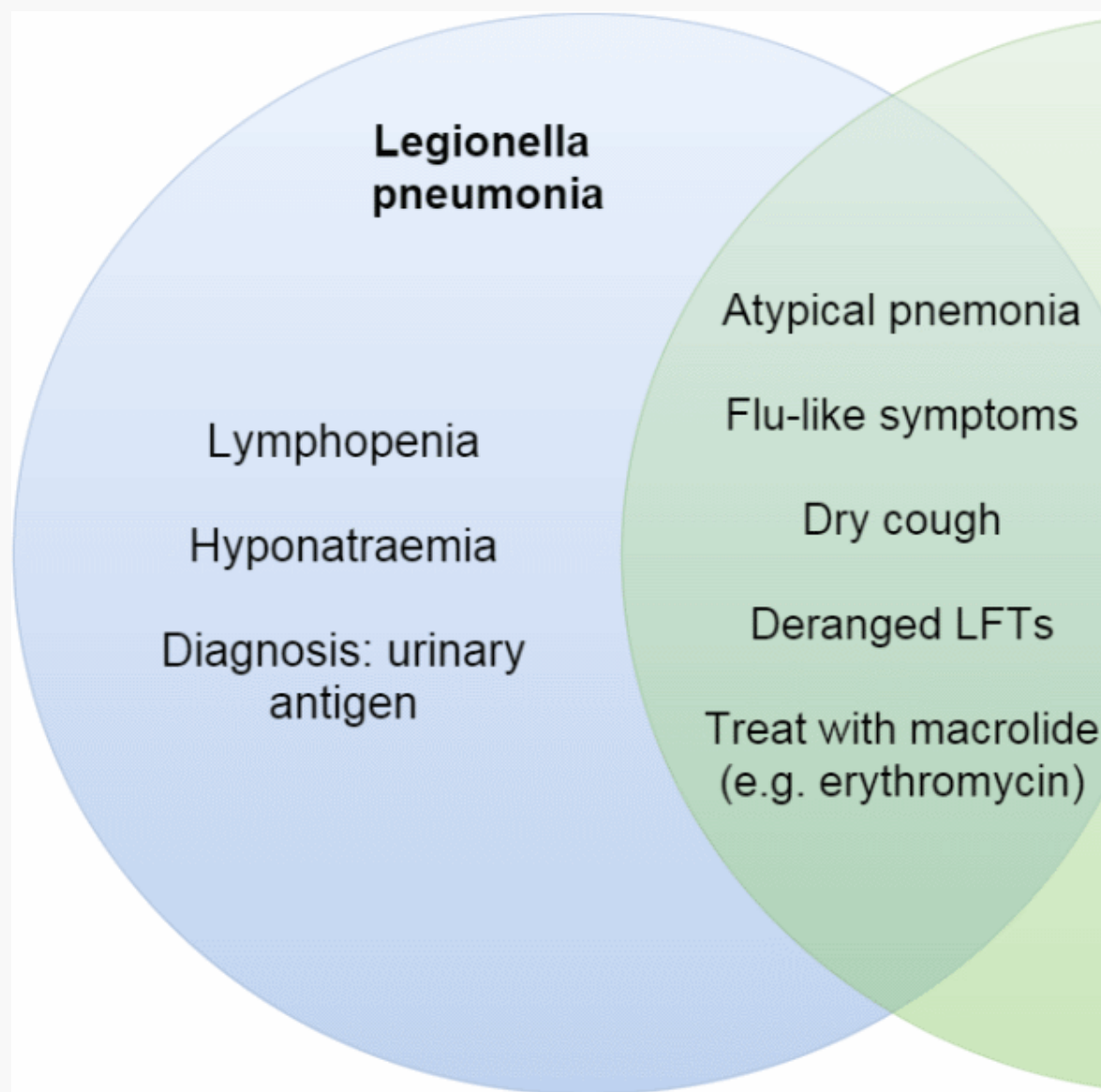
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Bloods on admission:

Na ⁺	128 mmol/l
K ⁺	3.7 mmol/l
Urea	8.2 mmol/l
Creatinine	150 µmol/l

Chest x-ray: Diffuse reticular opacities.

What is the most likely causative organism?



<input type="radio"/>	<i>Staphylococcus aureus</i>
<input type="radio"/>	<i>Pneumocystis jirovecii</i>
<input checked="" type="radio"/>	<i>Mycoplasma pneumoniae</i>
<input type="radio"/>	<i>Streptococcus pneumoniae</i>
<input type="radio"/>	<i>Haemophilus influenzae</i>

Overall score: **0%**

1 -

□ Question 63 of 200



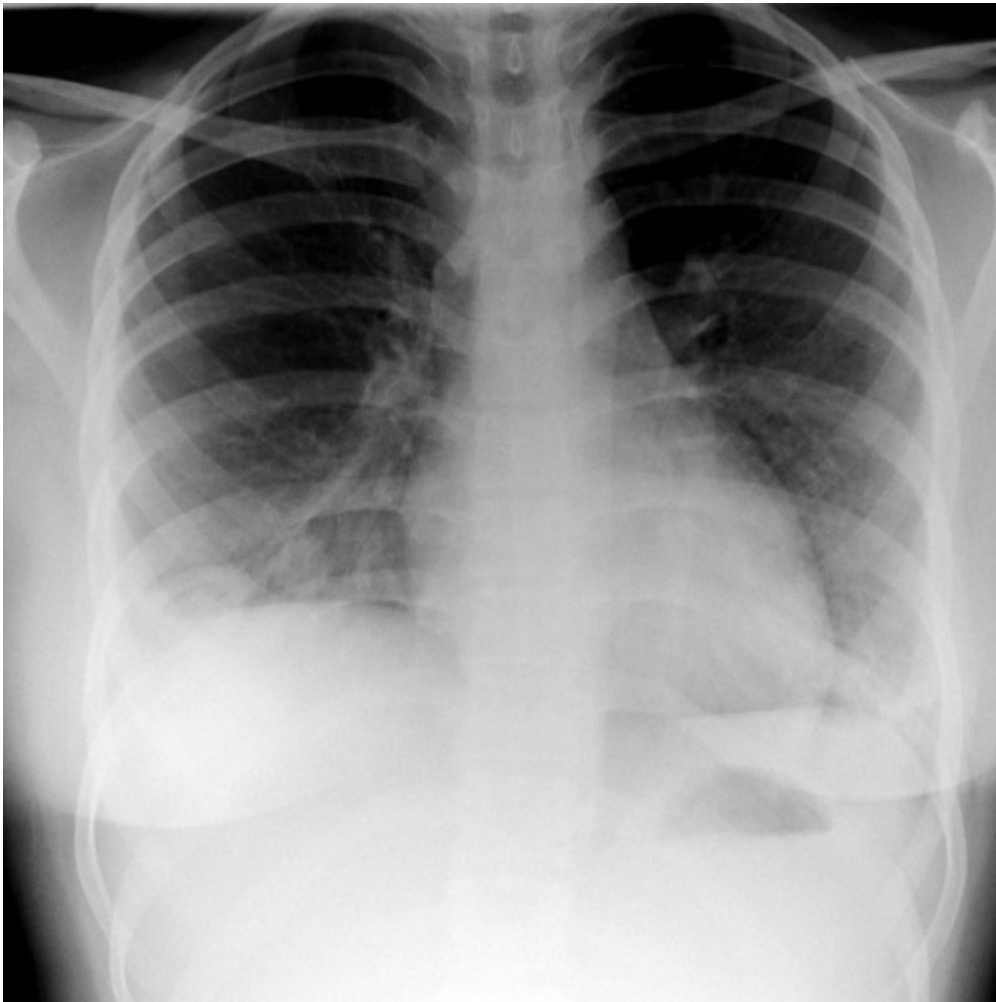
A 35-year-old man is investigated for lethargy, fever, cough and weight loss. He has been treated by his GP with five course antibiotics over the past six months for a combination of chest and sinus infections. His symptoms however have continued unabated.

Clinical examination is unremarkable other than some scattered crackles in the right base. He is afebrile. Lung function tests and blood tests show the following

FEV1	4.3 L (99% of predicted)
FVC	5.1 L (101% of predicted)
FEV1/FVC	84%

Hb	13.1 g/dl	Na ⁺	141 mmol/l
Platelets	459 * 10 ⁹ /l	K ⁺	3.6 mmol/l
WBC	6.9 * 10 ⁹ /l	Urea	7.9 mmol/l
		Creatinine	91 µmol/l
		CRP	78 mg/l

A chest x-ray is requested:



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What is the most likely diagnosis?

	Lung cancer
	Tuberculosis
	Granulomatosis with polyangiitis
	Cryptogenic organizing pneumonia
	Churg-Strauss syndrome

Dashboard

Overall score: 0%

1 -

□ Question 63 of 200



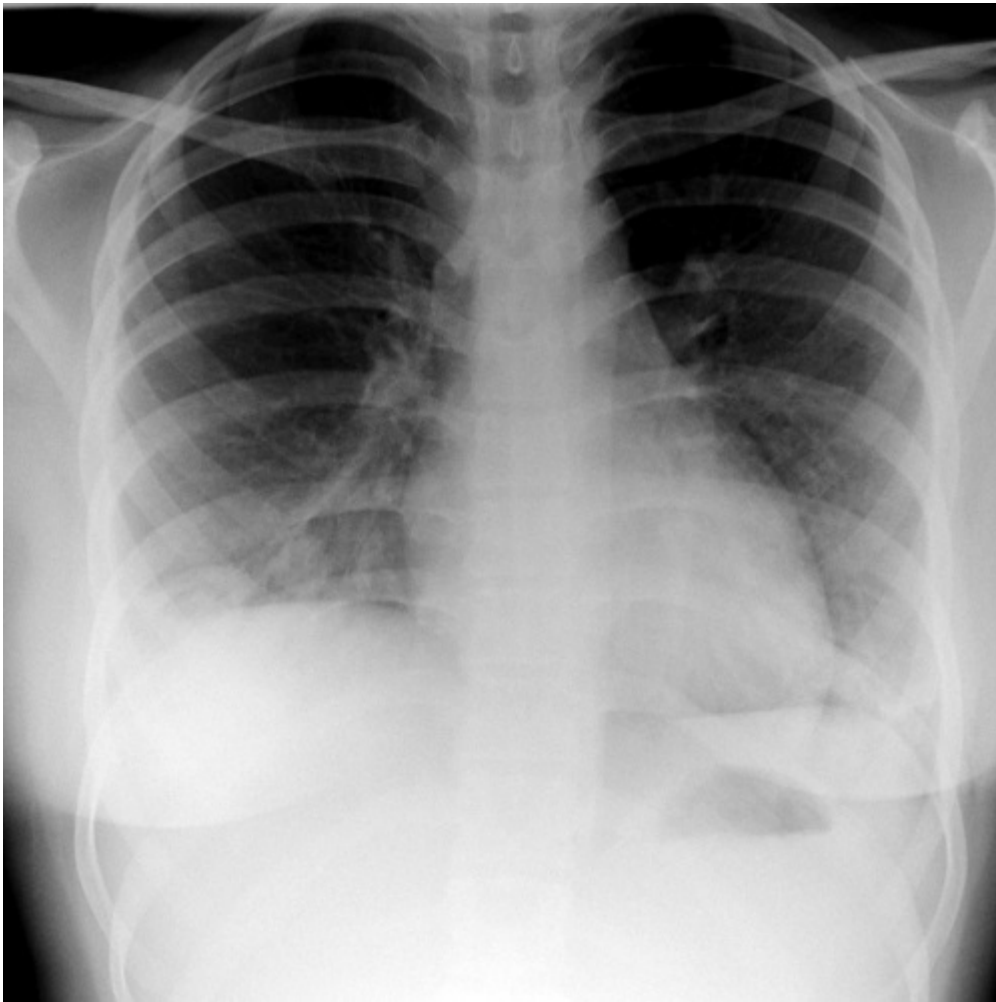
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Hb	13.1 g/dl	Na ⁺	141 mmol/l
Platelets	459 * 10 ⁹ /l	K ⁺	3.6 mmol/l
WBC	6.9 * 10 ⁹ /l	Urea	7.9 mmol/l
		Creatinine	91 µmol/l
		CRP	78 mg/l

A chest x-ray is requested:



© Image used on license from Radiopaedia



What is the most likely diagnosis?

	Lung cancer
	Tuberculosis
	Granulomatosis with polyangiitis
	Cryptogenic organizing pneumonia
	Churg-Strauss syndrome

Dashboard

Overall score: **0%**

1 -

□ Question 63 of 200

□ □

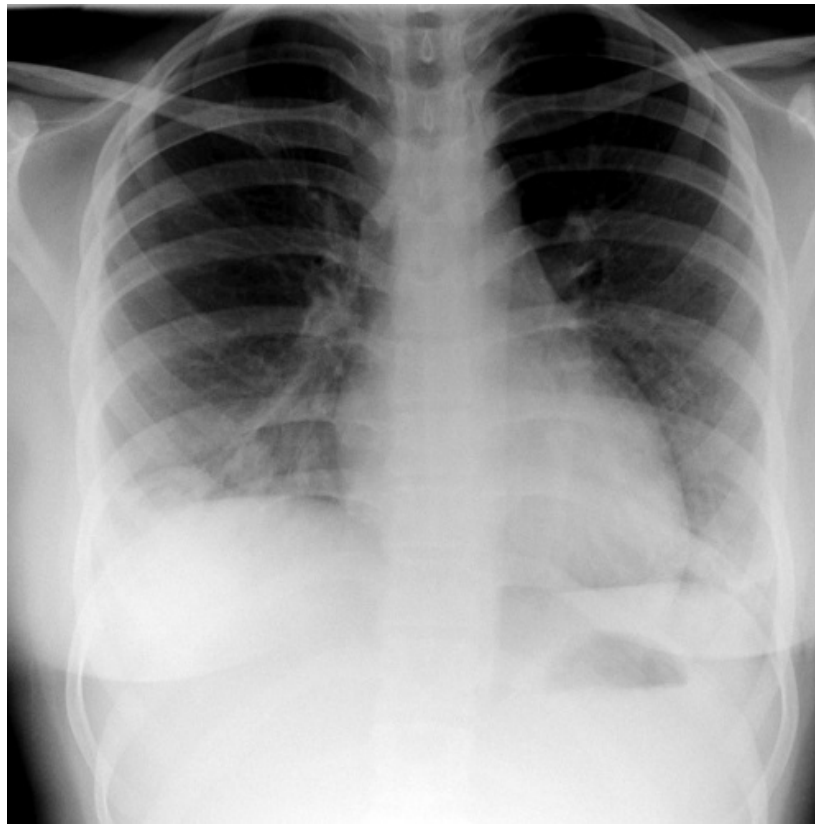
A 35-year-old man is investigated for lethargy, fever, cough and weight loss. He has been treated by his GP with five course antibiotics over the past six months for a combination of chest and sinus infections. His symptoms however have continued unabated.

Clinical examination is unremarkable other than some scattered crackles in the right base. He is afebrile. Lung function tests and blood tests show the following

FEV1	4.3 L (99% of predicted)
FVC	5.1 L (101% of predicted)
FEV1/FVC	84%

Hb	13.1 g/dl	Na ⁺	141 mmol/l
Platelets	459 * 10 ⁹ /l	K ⁺	3.6 mmol/l
WBC	6.9 * 10 ⁹ /l	Urea	7.9 mmol/l
		Creatinine	91 µmol/l
		CRP	78 mg/l

A chest x-ray is requested:



© Image used on license from Radiopaedia



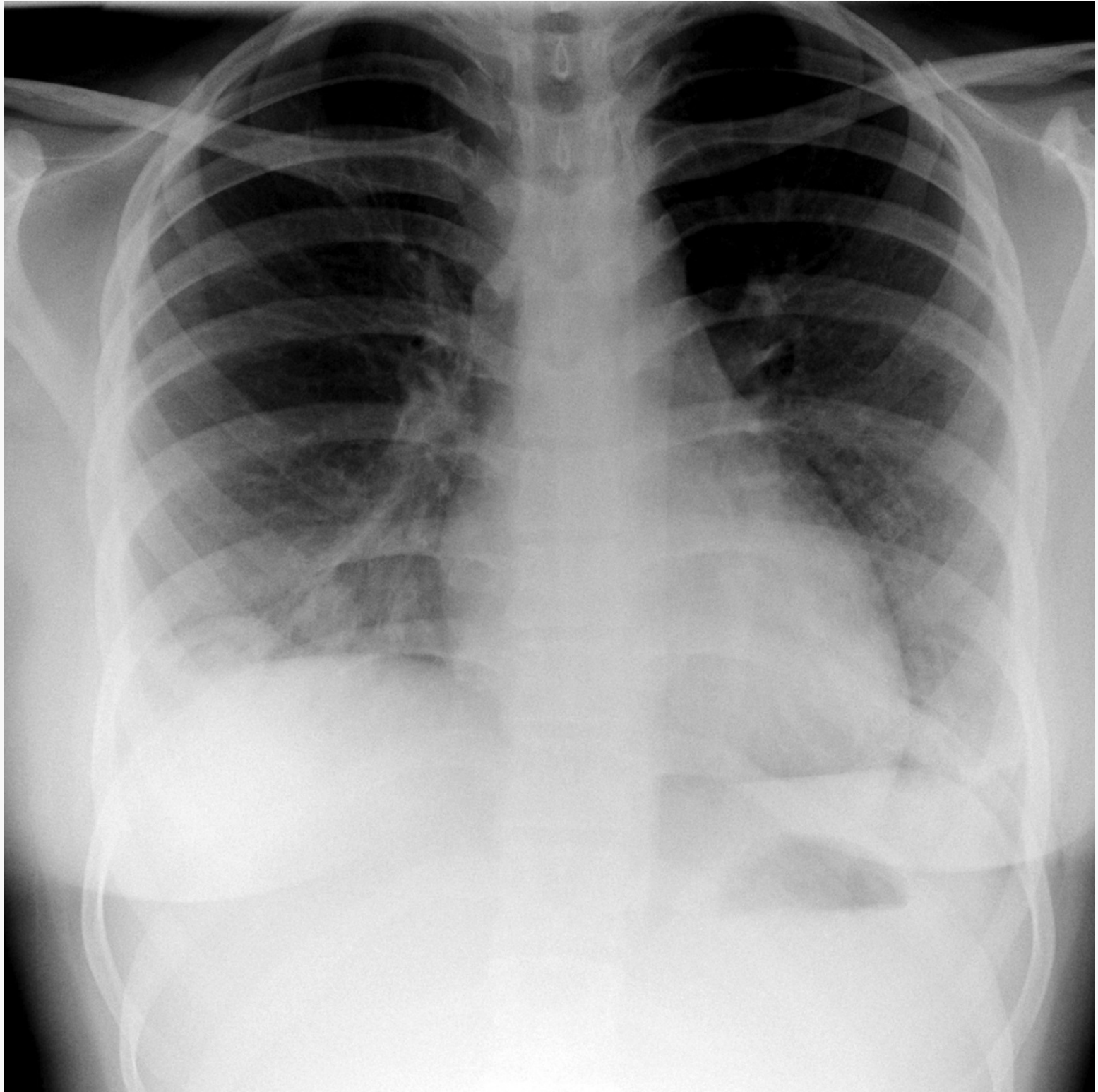
What is the most likely diagnosis?

	Lung cancer
	Tuberculosis
	Granulomatosis with polyangiitis
	Cryptogenic organizing pneumonia
	Churg-Strauss syndrome

Dashboard

Overall score: 0%

1 -



Question 63 of 200

A 35-year-old man is investigated for asthma and is given a 2-week course antibiotics over the past 2 weeks but his symptoms have continued unabated.

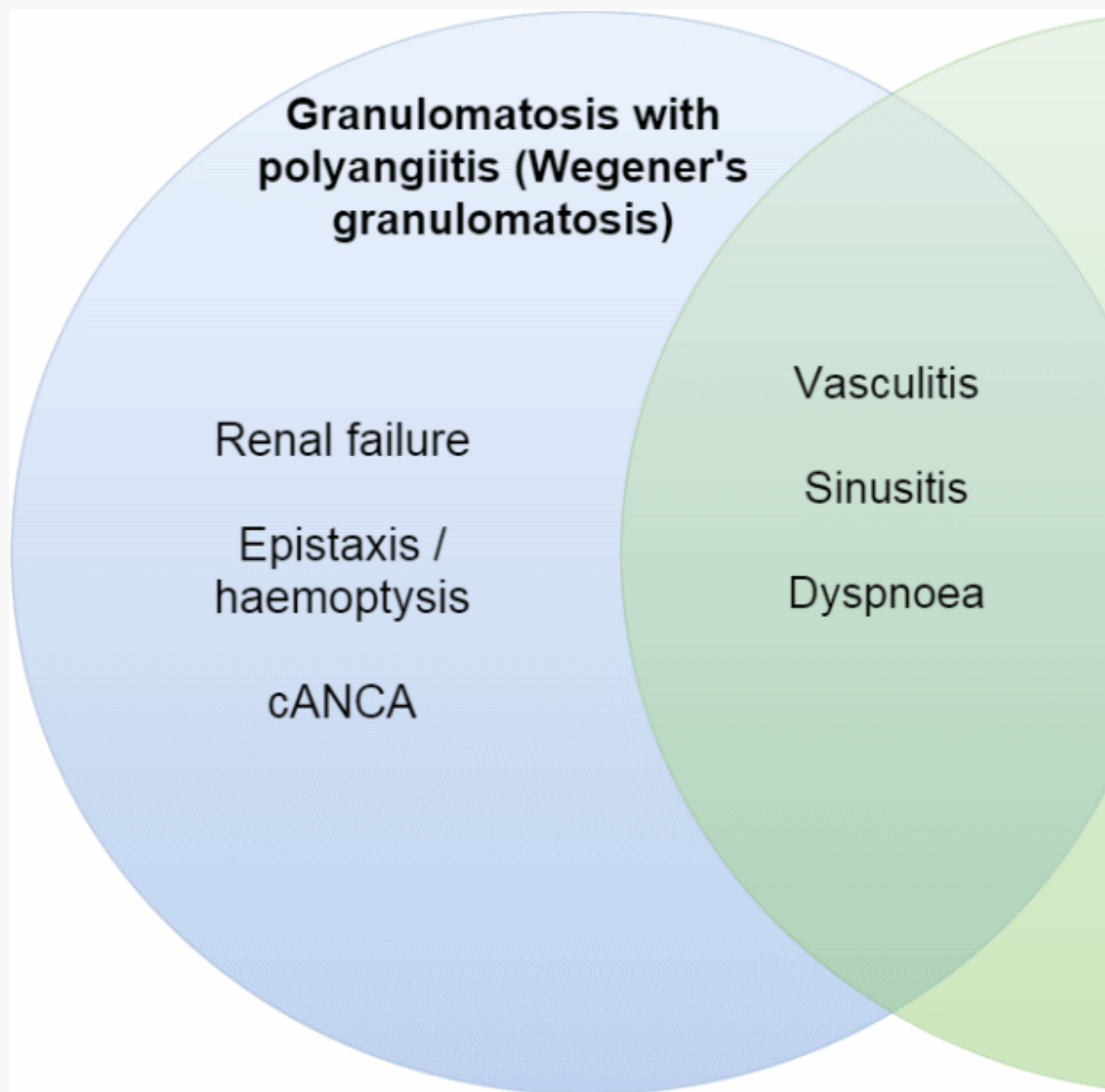
Clinical examination is unremarkable. Chest x-ray is normal. Further tests and blood tests show the following results:

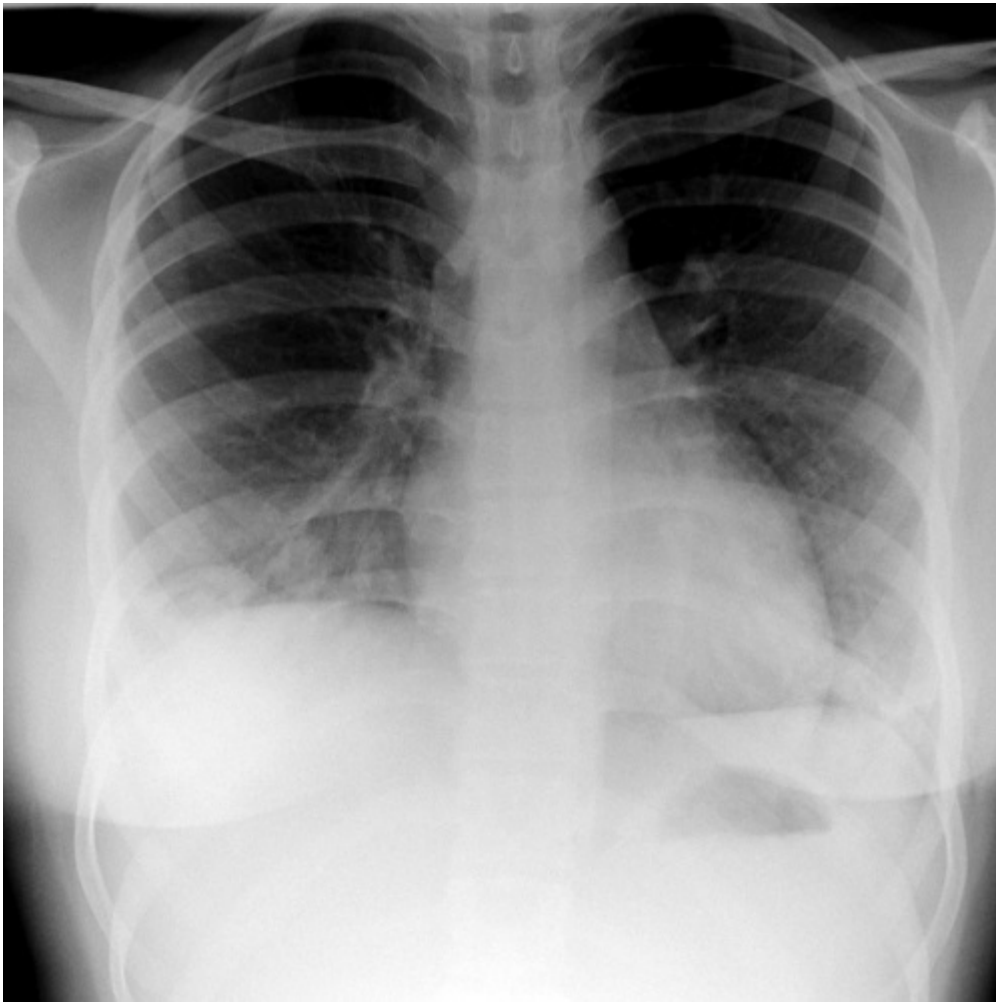
FEV1	4.3 L (99% of predicted)
FVC	5.1 L (101% of predicted)
FEV1/FVC	84%

Hb	13.1 g/dl	Na ⁺	138 mmol/l
Platelets	459 * 10 ⁹ /l	K ⁺	4.2 mmol/l

WBC	6.9 * 10 ⁹ /l	Urea	7.9 mmol/l
		Creatinine	91 µmol/l
		CRP	78 mg/l

A chest x-ray is requested:





© Image used on license from Radiopaedia



What is the most likely diagnosis?

	Lung cancer
	Tuberculosis
	Granulomatosis with polyangiitis
	Cryptogenic organizing pneumonia
	Churg-Strauss syndrome

Dashboard

Overall score: **0%**

1 -

□ Question 63 of 200

□ □

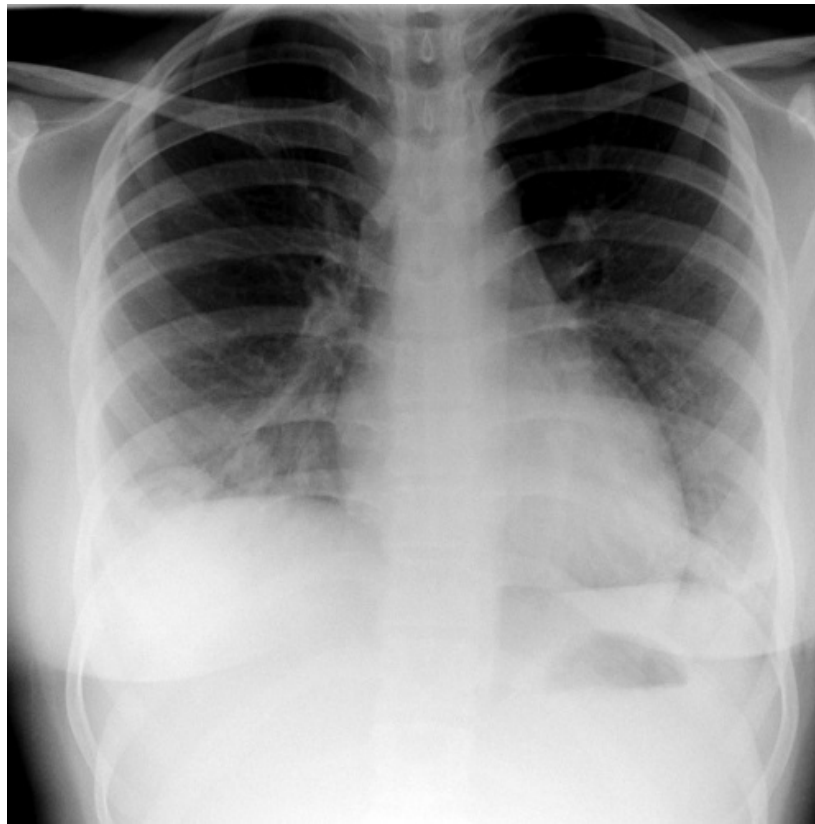
A 35-year-old man is investigated for lethargy, fever, cough and weight loss. He has been treated by his GP with five course antibiotics over the past six months for a combination of chest and sinus infections. His symptoms however have continued unabated.

Clinical examination is unremarkable other than some scattered crackles in the right base. He is afebrile. Lung function tests and blood tests show the following

FEV1	4.3 L (99% of predicted)
FVC	5.1 L (101% of predicted)
FEV1/FVC	84%

Hb	13.1 g/dl	Na ⁺	141 mmol/l
Platelets	459 * 10 ⁹ /l	K ⁺	3.6 mmol/l
WBC	6.9 * 10 ⁹ /l	Urea	7.9 mmol/l
		Creatinine	91 µmol/l
		CRP	78 mg/l

A chest x-ray is requested:



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What is the most likely diagnosis?

	Lung cancer
	Tuberculosis
	Granulomatosis with polyangiitis
	Cryptogenic organizing pneumonia
	Churg-Strauss syndrome

Dashboard

Overall score: 0%

1 -



□ Question 64 of 200



A 65-year-old man presents to the respiratory clinic with worsening haemoptysis the past 3 months. He is also concerned as he has noticed a loss of 6kg in the past 2 months. He previously completed a course of tuberculosis (TB) treatment 20 years ago, and he is currently a smoker, with a 50 pack year history.

On examination he is cachectic. Temperature is 36.8°C, heart rate 80 bpm, respiratory rate 18 breaths per minute. There are decreased breath sounds and dullness to percussion over the right upper lobe, and conjunctival pallor. His fingers are clubbed. The rest of his examination is unremarkable.

Investigations:

Na+	131 mmol/l
K+	4.3 mmol/l
Urea	6.1 mmol/l
Creatinine	102 µmol/l
Serum corrected calcium	2.35 mmol/l
Serum bilirubin	21 µmol/l
Serum alkaline phosphatase	85 IU/l
Serum aspartate aminotransferase	16 IU/l
C Reactive protein (CRP)	15 mg/l
Haemoglobin	110 g/l
Mean Corpuscle Volume	77 fL
White cell count	$11.2 \times 10^9/L$
Neutrophils	$7.5 \times 10^9/L$
Eosinophils	$1.9 \times 10^9/L$
Lymphocytes	$1.1 \times 10^9/L$

Basophils	0.0 x 10 ⁹ /L
Platelets	490 x 10 ⁹ /L
INR	1.0

Chest x-ray: Intracavitary mass in the right upper zone

What is the next most useful diagnostic test?

<input type="radio"/>	Aspergillus precipitins
<input type="radio"/>	Bronchoalveolar lavage
<input type="radio"/>	Sputum cultures
<input type="radio"/>	Bronchoscopy and biopsy
<input type="radio"/>	Skin prick test

Dashboard
<p>Overall score: 0%</p> <p>1 -</p>

□ Question 64 of 200



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	Bronchoalveolar lavage
	Sputum cultures
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Dashboard

Overall score: **0%**
1 -

□ Question 64 of 200

□ □

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Chest x-ray: Intracavitary mass in the right upper zone

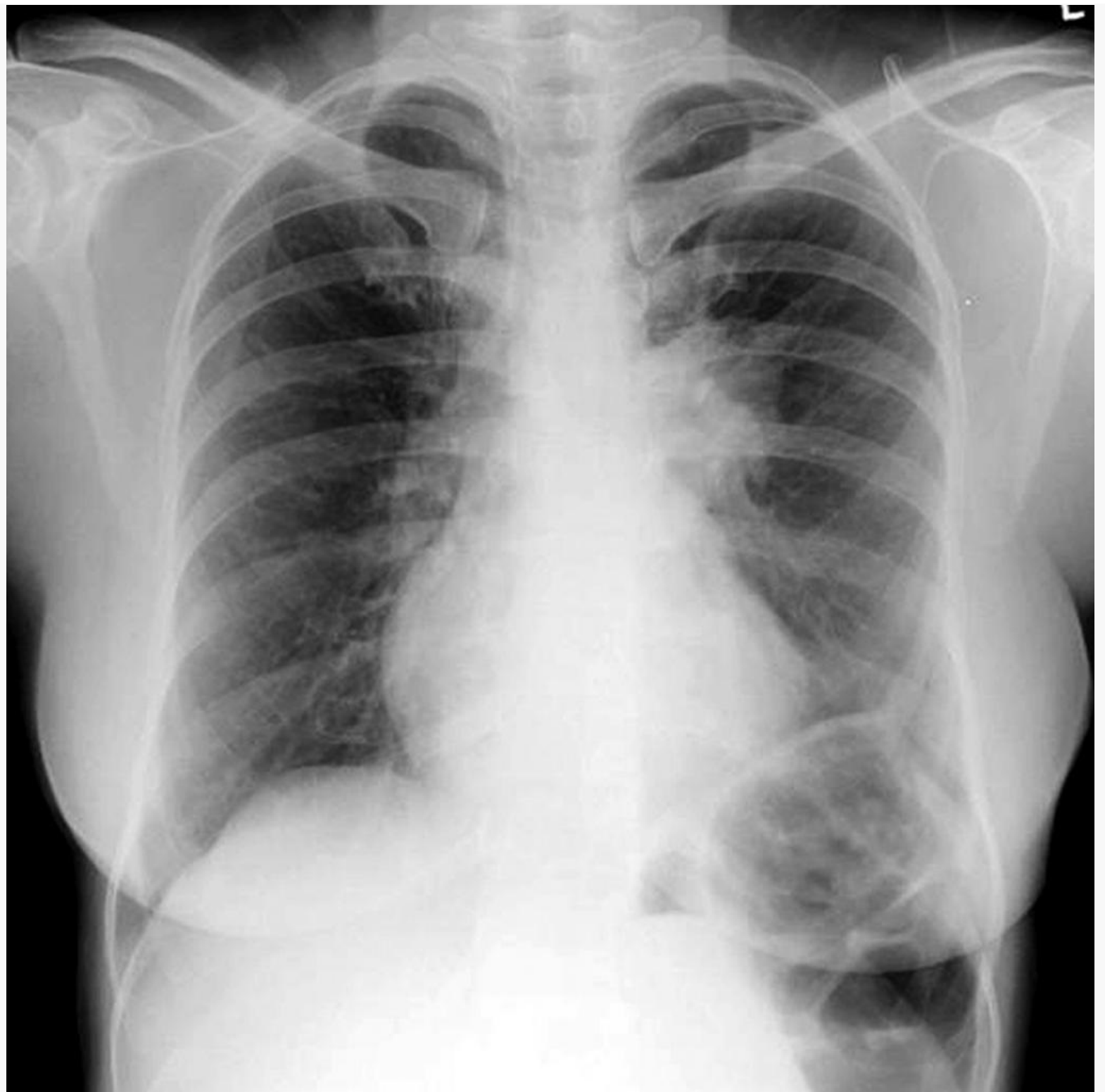
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	Bronchoalveolar lavage
	Sputum cultures
	Bronchoscopy and biopsy
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Dashboard

Overall score: **0%**

1 -



□ Question 64 of 200

□ □

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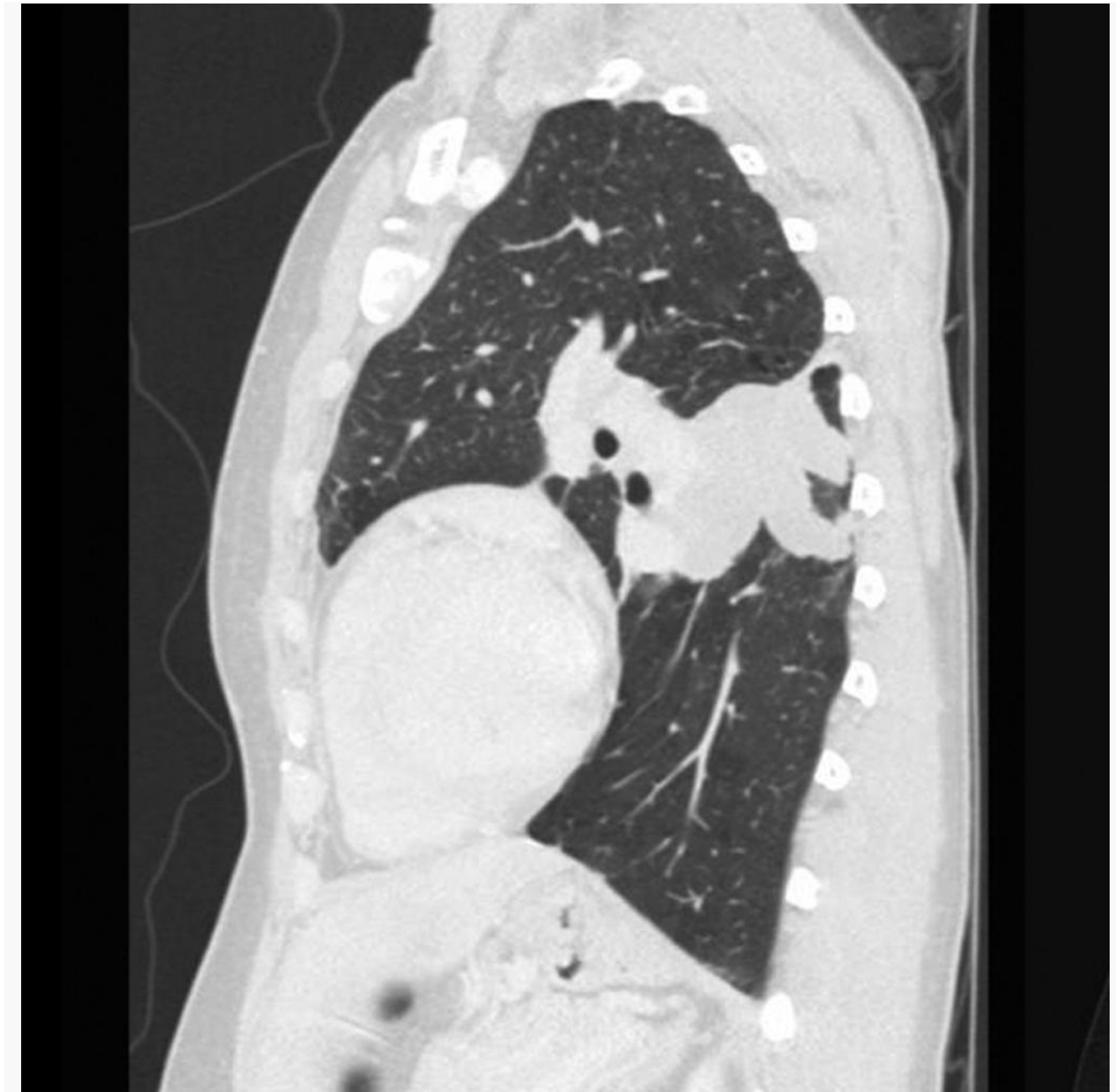
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	Sputum cultures
	Bronchoscopy and biopsy
	Skin prick test

Dashboard

Overall score: **0%**

1 -



□ Question 65 of 200

□ □

A 38-year-old male plumber is referred to the medical assessment unit by his GP due to reduced oxygen saturations. He has had mild asthma since childhood but no other medical history of note. His medications are a salbutamol inhaler when required and co-codamol for long standing back pain. On examination he is found to have an early diastolic murmur but no other abnormalities are detected. He goes on to have a chest x-ray which demonstrates apical interstitial shadowing. He undergoes pulmonary function tests which are as follows:

FEV1	1.9L	(Predicted 2.1-3.1)
FVC	2.2	(Predicted 3.0-4.4)
TLC	4.5	(Predicted 5.0-7.5)
Transfer factor (DLCO)	Low	

What is the most likely diagnosis?

	Ankylosing spondylitis
	Asbestosis
	Extrinsic allergic alveolitis
	Churg-Strauss syndrome
	Sarcoidosis

Dashboard

Overall score: 0%

1 -

□ Question 65 of 200

□ □

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	Ankylosing spondylitis
	Asbestosis
	Extrinsic allergic alveolitis
	Churg-Strauss syndrome
	Sarcoidosis

Dashboard

Overall score: **0%**

1 -

Question 66 of 200

A 35-year-old female banker from Scotland presents with breathlessness on exertion. She is a non smoker and has two budgies at home. She had severe pneumonia 5 years ago and required intubation on intensive care for 5 days. She recovered but has reported ongoing dyspnoea and on examination has an inspiratory wheeze. This has not improved despite her GP starting inhaled steroids for asthma. Her chest X-ray was unremarkable, peak flow was reduced and eosinophil count was normal. What is the most likely diagnosis?

<input type="checkbox"/>	Cystic fibrosis
<input type="checkbox"/>	Severe asthma
<input type="checkbox"/>	Posterior subglottic stenosis
<input type="checkbox"/>	Chronic obstructive pulmonary disease
<input type="checkbox"/>	Allergic bronchopulmonary aspergillosis

Dashboard

Overall score: 0%

1 -

Question 66 of 200

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	Cystic fibrosis
	Severe asthma
	Posterior subglottic stenosis
	Chronic obstructive pulmonary disease
	Allergic bronchopulmonary aspergillosis

Dashboard

Overall score: **0%**

1 -

Question 67 of 200

□ □

An 81-year-old nursing home resident presents with a 48-hour history of pyrexia, myalgia and coryza. On examination, her temperature is 37.9°C and she is visibly coryzal. Her chest is clear to auscultation. Her chest X-ray is clear. Her relatives inform you that the nursing home has recently been closed to visitors due to an Influenza outbreak. Which of the following drugs should you also consider adding?

	Empirical antibiotics for pneumonia
	Zanamivir
	Oseltamivir
	Ribavirin
	Salbutamol nebulisers

Dashboard

Overall score: 0%

1 -

Question 67 of 200

□ □

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	Empirical antibiotics for pneumonia
	Zanamivir
	Oseltamivir
	Ribavirin
	Salbutamol nebulisers

Dashboard

Overall score: **0%**

1 -

Question 68 of 200

You are caring for 54 year-old lady on the respiratory ward. She has community acquired pneumonia and large left sided pleural effusion. She is dyspnoeic at rest and hypoxic - oxygen saturations are 96% on 60% high flow oxygen.

A bedside ultrasound scan shows an anechoic effusion with no apparent loculations. You proceed to perform a diagnostic aspirate and the results are as follows:

pH	6.9
Glucose	2.9mmol/L
Protein	32g/dL
Gram stain	No organisms seen

What is the correct course of action?

<input type="checkbox"/>	18Fr chest drain and intravenous antibiotics
<input type="checkbox"/>	Therapeutic aspiration and intravenous antibiotics
<input type="checkbox"/>	Referral to thoracic surgeons
<input type="checkbox"/>	Broad spectrum intravenous antibiotics
<input type="checkbox"/>	18Fr chest drain, intravenous antibiotics and intrapleural fibrinolysis

Dashboard

Overall score: **0%**

1 -

Question 68 of 200

□ □

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	Referral to thoracic surgeons
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	18Fr chest drain, intravenous antibiotics and intrapleural fibrinolysis

Dashboard

Overall score: **0%**

1 -

Question 69 of 200

□ □

A 58 year-old male presents with a 4 hour history of chest pain and breathlessness. The pain is right-sided and is sharp in nature, worsening on deep inspiration.

His medical background includes chronic obstructive airways disease. He has a 40-pack-year smoking history.

A recent respiratory clinic letter proves the following results from a spirometry test:

FVC	2.8L
FEV1	1.47 (40% predicted)
FEV1 / FVC ratio	53%

On examination he is tachypnoeic with a respiratory rate of 28. His oxygen saturations are 92% on room air.

An ECG reveals sinus tachycardia with a rate of 112 beats per minute.

A chest radiograph reveals a right-sided pneumothorax 1.8cm in width at the level of the hilum

What is the most appropriate initial management?

	Pleural aspiration
	High-flow oxygen
	Insert chest drain
	Talc pleurodesis
	Observe for 24 hours

Overall score: **0%**

1 -

Question 69 of 200

□ □

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What is the most appropriate initial management?

	Pleural aspiration
	High-flow oxygen
	Insert chest drain
	Talc pleurodesis
	Observe for 24 hours

Overall score: **0%**

1 -

Question 70 of 200

□ □

A 50-year old gentleman presents with shortness of breath. He is a current smoker of 20 cigarettes per day and used to work a coal miner. His body mass index (BMI) is 40 kg/m. His spirometry results are as follows:

Forced expiratory volume in 1 second (FEV1)	3.05 (79% predicted)
Forced vital capacity (FVC)	3.27 (70% predicted)
Diffusion capacity of the lung (DLCO)	86% predicted
Rate of carbon monoxide uptake (KCO)	105% predicted

What is the likely cause of this gentlemen's shortness of breath?

	Obesity
	Pneumonconiosis
	Chronic obstructive pulmonary disease (COPD)
	Idiopathic pulmonary fibrosis
	Asthma

Dashboard

Overall score: 0%

1 -

Question 70 of 200



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	Obesity
	Pneumonconiosis
	Chronic obstructive pulmonary disease (COPD)
	Idiopathic pulmonary fibrosis
	Asthma

Dashboard

Overall score: 0%

1 -

Question 71 of 200

□ □

A 45-year-old male with long standing asthma presents to his specialist doctor complaining of recurrent chest infections over the last year. He has a productive cough most mornings of thick, brownish sputum for most days of the last year and he feels it is getting worse. He has been to his general practitioner on a number of occasions and been treated with oral antibiotics and steroids but with no significant impact on symptoms. His general practitioner has also stepped up his asthma treatment to regular use of a long-acting beta-2 adrenergic agonist and an inhaled steroid, which he feels may have made a slight difference. He denies any fevers or night sweats but has lost approximately two kilograms in weight over the last year. He was diagnosed with asthma as a teenager, takes his inhalers regularly and has never had any hospital admissions. He has no other medical conditions and takes no other medications other than over the counter vitamin supplements. He drinks a moderate amount of alcohol and does not smoke. He works as an economist and travels regularly to the middle east and china.

On examination, he is comfortable at rest. His respiratory rate is 16 breaths/min, his oxygen saturation 95% breathing room air and his chest is clear to auscultation. His heart rate is 65 beats/min and his heart sounds are normal. There is no palpable lymphadenopathy in the axillae or groin.

What is the most likely diagnosis?

	Cystic fibrosis
	Allergic broncho-pulmonary aspergillosis
	Tuberculosis
	Lung cancer
	Pseudomonas infection

Dashboard

Overall score: 0%

1 -

□ Question 71 of 200

□ □

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Question 71 of 200

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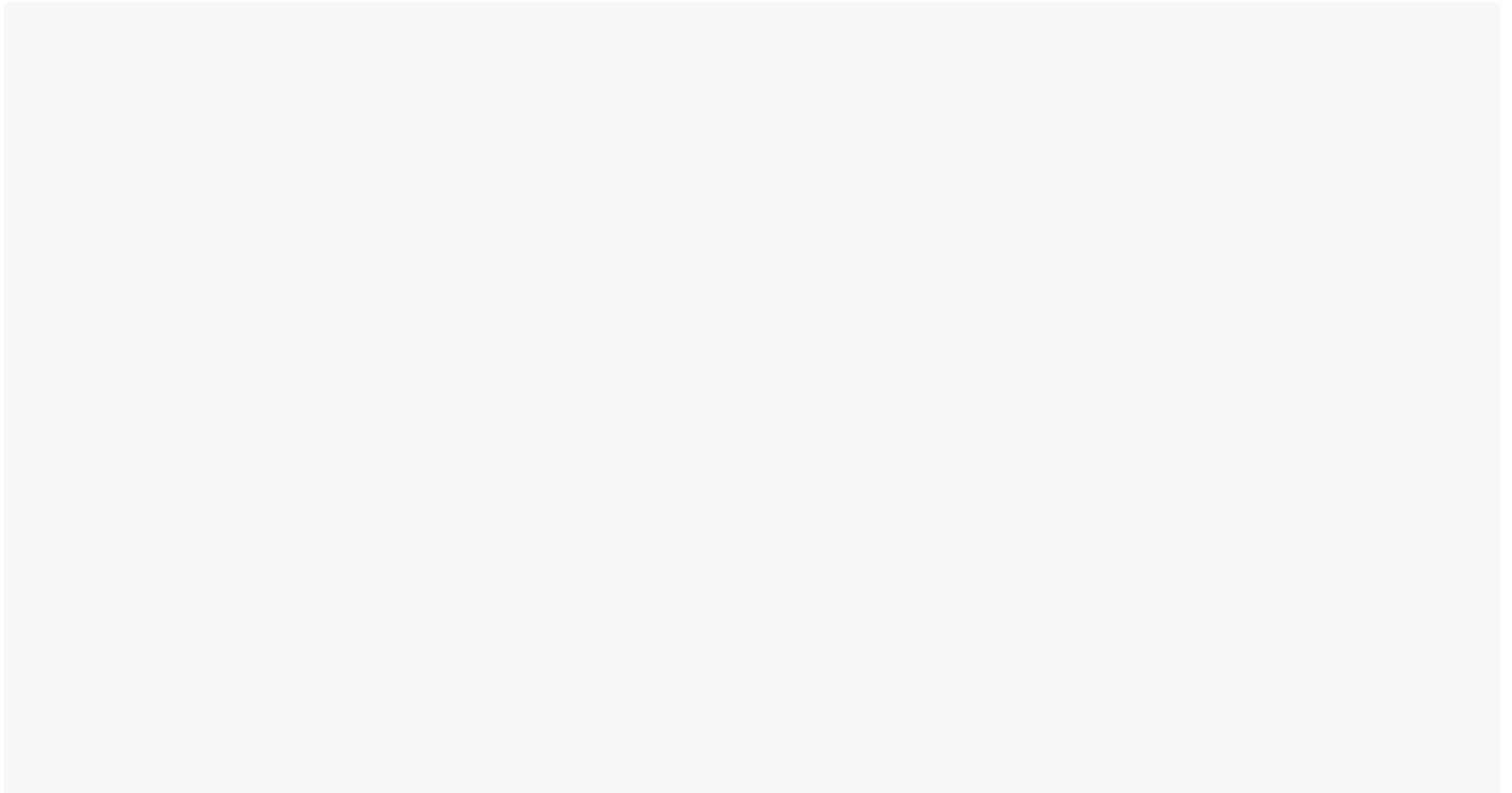
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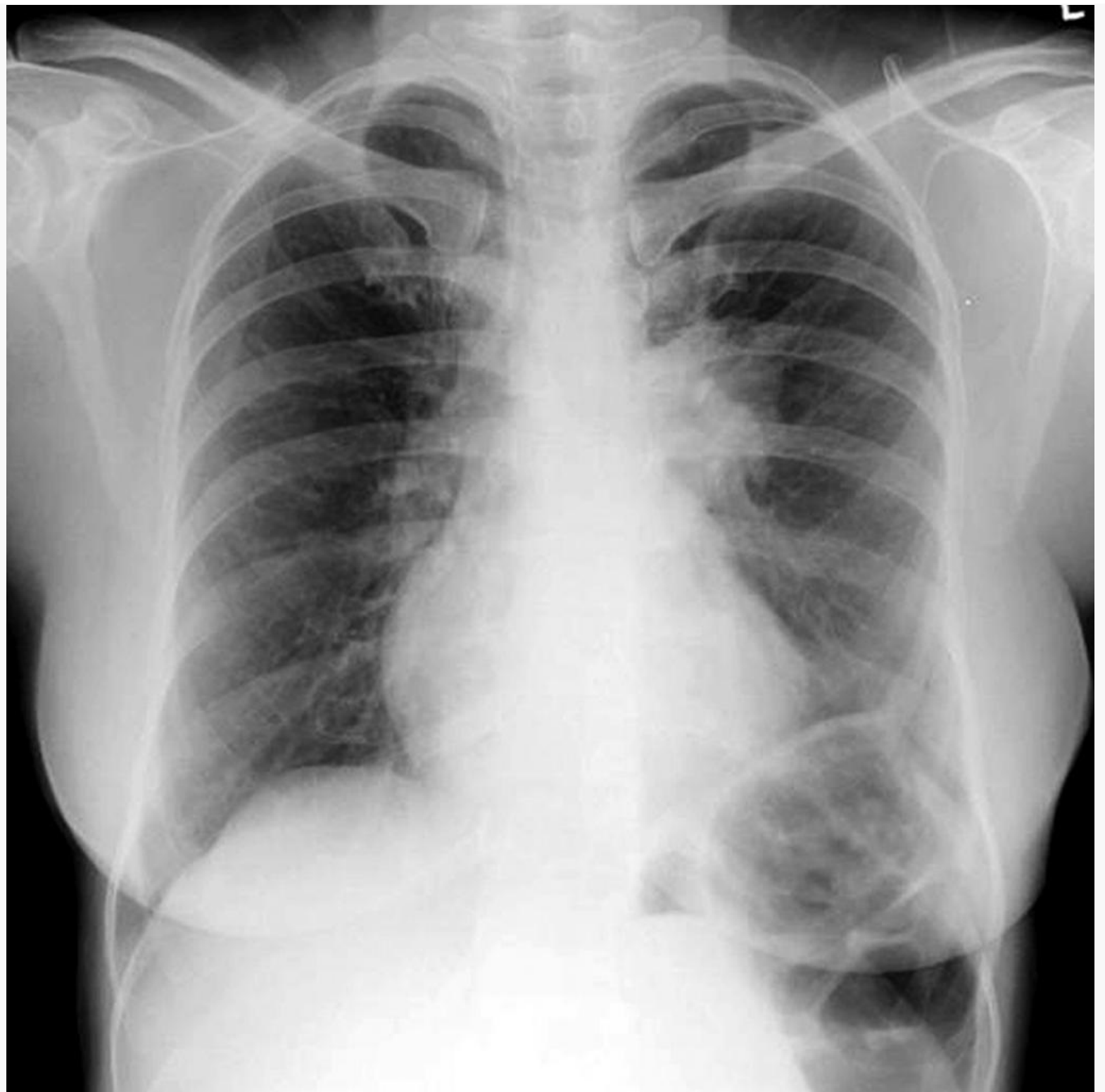
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	Allergic broncho-pulmonary aspergillosis
	Tuberculosis
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Dashboard

Overall score: 0%

1 -





Question 71 of 200

□ □

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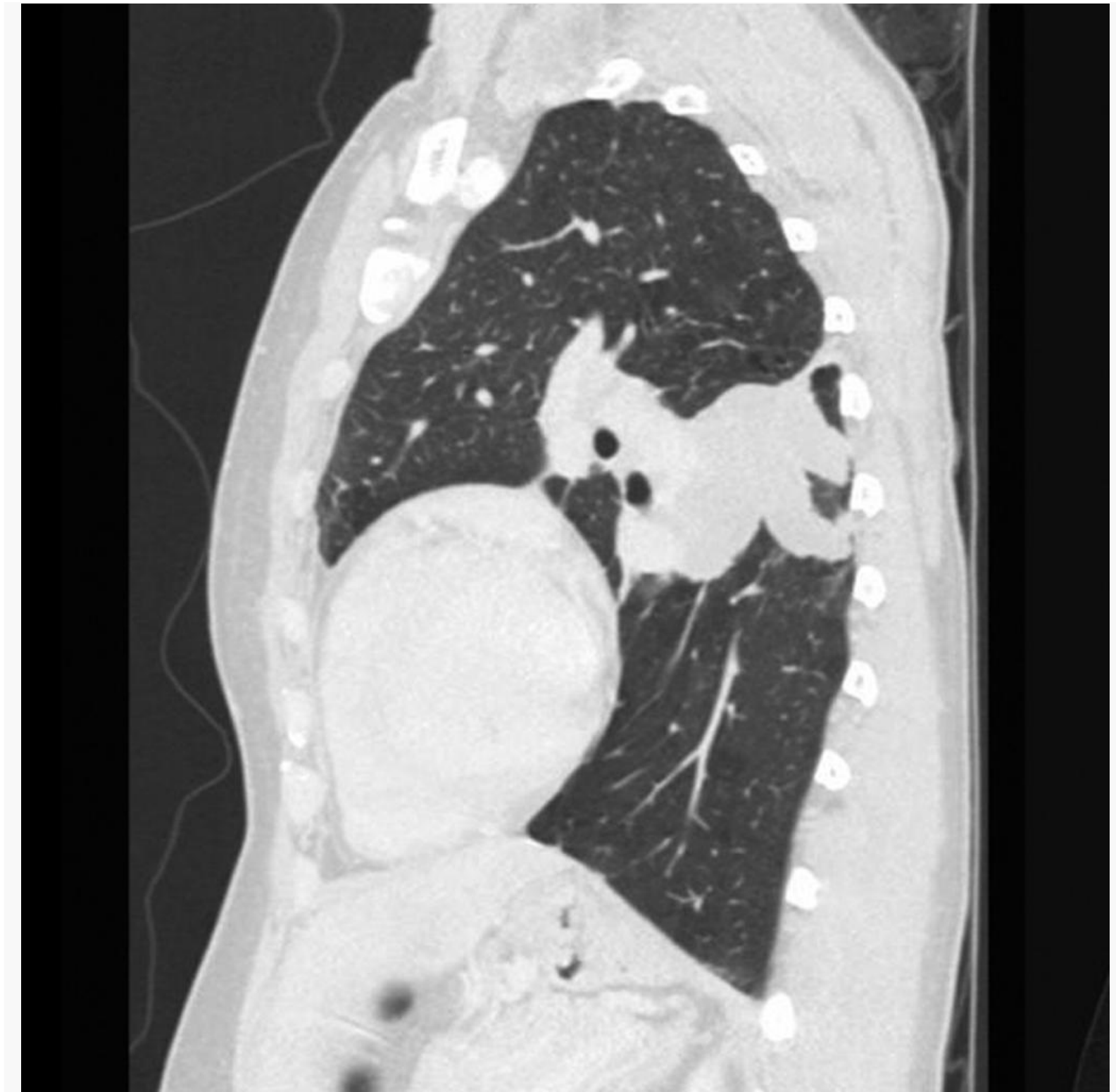
What is the most likely diagnosis?

	Cystic fibrosis
	Allergic broncho-pulmonary aspergillosis
	Tuberculosis
	Lung cancer
	Pseudomonas infection

Dashboard

Overall score: 0%

1 -



Question 72 of 200

□ □

A tall 23-year-old male presents to the Emergency Department with shortness of breath and chest pain. The symptoms came on suddenly with the chest pain sharp in nature and worse on inspiration. He has no past medical or relevant family history and takes no medications. He smokes 5 cigarettes per week and has done for 6 years. On examination, he is tachycardic at 105 beats per minute and tachypnoeic. Bloods pressure and temperature are normal. On respiratory examination there is reduced air entry on the left side; other systems are normal. ECG shows sinus tachycardia and blood analysis is unremarkable. Chest radiograph shows a left sided pneumothorax measuring 1.7 cm at the left of the hilum. How would you manage this patient?

	High flow oxygen and observe
	High flow oxygen and chest aspiration
	Cardiothoracic surgery referral
	Discharge with outpatient follow up
	Chest drain insertion

Dashboard

Overall score: 0%

1 -

□ Question 72 of 200

□ □

A tall 23-year-old male presents to the Emergency Department with shortness of breath and chest pain. The symptoms came on suddenly with the chest pain sharp in nature and worse on inspiration. He has no past medical or relevant family history and takes no medications. He smokes 5 cigarettes per week and has done for 6 years. On examination, he is tachycardic at 105 beats per minute and tachypnoeic. Bloods pressure and temperature are normal. On respiratory examination there is reduced air entry on the left side; other systems are normal. ECG shows sinus tachycardia and blood analysis is unremarkable. Chest radiograph shows a left sided pneumothorax measuring 1.7 cm at the left of the hilum. How would you manage this patient?

	High flow oxygen and observe
	High flow oxygen and chest aspiration
	Cardiothoracic surgery referral
	Discharge with outpatient follow up
	Chest drain insertion

Dashboard

Overall score: **0%****1** -

Question 73 of 200

□ □

A 71-year-old man presents to his GP having suffered from daytime sleeping, which has become so interrupting that he has been placed on probation by his manager at work. He complains of having frequent morning headaches and often gets breathless on walking to the shops. He used to smoke 20 cigarettes per day for 20 years and drinks a pint of beer per evening at the pub. He is also clinically obese.

After being referred to the hospital, an evening arterial blood test is performed and reveals a PaO₂ of 9.9 kPa and a PaCO₂ of 4.4 kPa. The arterial blood gas is repeated the next morning and reveals a PaO₂ of 10.0 kPa and a PaCO₂ of 9.1 kPa.

What is the most likely diagnosis?

	Pulmonary hypertension
	Central sleep apnoea
	Obesity hypoventilation syndrome
	Benign intracranial hypertension
	Multiple pulmonary emboli

Dashboard

Overall score: 0%

1 -

Question 73 of 200

A 71-year-old man presents to his GP having suffered from daytime sleeping, which has become so interrupting that he has been placed on probation by his manager at work. He complains of having frequent morning headaches and often gets breathless on walking to the shops. He used to smoke 20 cigarettes per day for 20 years and drinks a pint of beer per evening at the pub. He is also clinically obese.

After being referred to the hospital, an evening arterial blood test is performed and reveals a PaO₂ of 9.9 kPa and a PaCO₂ of 4.4 kPa. The arterial blood gas is repeated the next morning and reveals a PaO₂ of 10.0 kPa and a PaCO₂ of 9.1 kPa.

What is the most likely diagnosis?

	Pulmonary hypertension
	Central sleep apnoea
	Obesity hypoventilation syndrome
	Benign intracranial hypertension
	Multiple pulmonary emboli

Dashboard

Overall score: **0%**

1 -

Question 74 of 200

A 23-year-old male non-smoker presents to your respiratory clinic complaining of increasing frequency of shortness of breath and wheezy episodes. He is a known asthmatic and regularly takes salbutamol after exercise and beclometasone 800mcg inhaler once a day. What is the most appropriate next management step?

<input type="checkbox"/>	Salmeterol
<input type="checkbox"/>	Increase beclometasone to 2000mcg
<input type="checkbox"/>	Aminophylline
<input type="checkbox"/>	Montelukast
<input type="checkbox"/>	Oral prednisolone

Dashboard

Overall score: 0%

1 -

□ Question 74 of 200

□ □

A 23-year-old male non-smoker presents to your respiratory clinic complaining of increasing frequency of shortness of breath and wheezy episodes. He is a known asthmatic and regularly takes salbutamol after exercise and beclometasone 800mcg inhaler once a day. What is the most appropriate next management step?

	Salmeterol
	Increase beclometasone to 2000mcg
	Aminophylline
	Montelukast
	Oral prednisolone

Dashboard

Overall score: **0%****1** -

Question 75 of 200

□ □

An 80-year-old man is admitted from a residential home via the Emergency Department. The staff at the residential home were concerned because the patient has a chesty cough and has been 'off legs.' On examination of his chest, he has coarse crepitations at the right base, chest radiograph confirms a right basal pneumonia. Bloods show the following:

Na ⁺	145 mmol/l
K ⁺	4.2 mmol/l
Urea	10.1 mmol/l
Creatinine	111 µmol/l

He is alert and orientated, respiratory rate is within normal range.

What is his approximate predicted mortality?

<input type="radio"/>	2%
<input type="radio"/>	7%
<input type="radio"/>	1%
<input type="radio"/>	50%
<input type="radio"/>	60%

Dashboard

Overall score: **0%**

1 -

Question 75 of 200



An 80-year-old man is admitted from a residential home via the Emergency Department. The staff at the residential home were concerned because the patient has a chesty cough and has been 'off legs.' On examination of his chest, he has coarse crepitations at the right base, chest radiograph confirms a right basal pneumonia. Bloods show the following:

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Urea	10.1 mmol/l
Creatinine	111 µmol/l

He is alert and orientated, respiratory rate is within normal range.

What is his approximate predicted mortality?

	2%
	7%
	1%
	50%
	60%

Dashboard

Overall score: 0%

1 -

Question 76 of 200

A 70-year-old lady with a background of type 2 diabetes mellitus and alcohol abuse presents with a fever and productive cough. She reports no weight loss or haemoptysis. She was born in England and has never travelled outside of the United Kingdom. She has never smoked cigarettes. On examination, she has crackles in her right upper lobe but is otherwise well and stable. A chest radiograph reveals consolidation which is cavitating in her right upper lobe. What is the most likely diagnosis?

<input type="checkbox"/>	Lung cancer
<input type="checkbox"/>	Tuberculosis
<input type="checkbox"/>	Pneumococcal pneumonia
<input type="checkbox"/>	Klebsiella pneumonia
<input type="checkbox"/>	Aspergillosis

Dashboard

Overall score: **0%**

1 -

Question 76 of 200

A 70-year-old lady with a background of type 2 diabetes mellitus and alcohol abuse presents with a fever and productive cough. She reports no weight loss or haemoptysis. She was born in England and has never travelled outside of the United Kingdom. She has never smoked cigarettes. On examination, she has crackles in her right upper lobe but is otherwise well and stable. A chest radiograph reveals consolidation which is cavitating in her right upper lobe. What is the most likely diagnosis?

	Lung cancer
	Tuberculosis
	Pneumococcal pneumonia
	Klebsiella pneumonia
	Aspergillosis

Dashboard

Overall score: **0%**

1 -

□ Question 76 of 200

□ □

A 70-year-old lady with a background of type 2 diabetes mellitus and alcohol abuse presents with a fever and productive cough. She reports no weight loss or haemoptysis. She was born in England and has never travelled outside of the United Kingdom. She has never smoked cigarettes. On examination, she has crackles in her right upper lobe but is otherwise well and stable. A chest radiograph reveals consolidation which is cavitating in her right upper lobe. What is the most likely diagnosis?

	Lung cancer
	Tuberculosis
	Pneumococcal pneumonia
	Klebsiella pneumonia
	Aspergillosis

Dashboard

Overall score: 0%

1 -





Question 77 of 200

□ □

A 75-year-old retired builder presents with a 2-month history of shortness of breath on exertion with associated chest pain, which he describes as a dull discomfort. The patient has no medical history of note and takes no regular medications. Up until his symptoms developed he was independent with all his activities of daily living.

Examination revealed decreased breath sounds on the right-hand side and a chest x-ray confirmed a right-sided pleural effusion with pleural thickening. A CT scan of the chest was then performed and the patient was referred to the thoracic surgeons for a video-assisted thoracoscopic surgical (VATS) biopsy to confirm the diagnosis.

What is the most appropriate management?

	Chemotherapy
	Chest drain insertion
	Pneumonectomy
	Radical radiotherapy
	Radiotherapy to surgical port sites

Dashboard

Overall score: 0%

1 -

Question 77 of 200



A 75-year-old retired builder presents with a 2-month history of shortness of breath on exertion with associated chest pain, which he describes as a dull discomfort. The patient has no medical history of note and takes no regular medications. Up until his symptoms developed he was independent with all his activities of daily living.

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What is the most appropriate management?

	Chemotherapy
	Chest drain insertion
	Pneumonectomy
	Radical radiotherapy
	Radiotherapy to surgical port sites

Dashboard

Overall score: 0%

1 -

□ Question 78 of 200

□ □

A 45 year old patient undergoing R-CHOP (Rituximab, Cyclophosphamide, Doxyrubicin, Vincristine and Prednisolone) chemotherapy for Non-Hodgkins Lymphoma presents with a progressive cough, rigors and fevers up to 39.4 degrees on his home thermometer. His GP had tried 2 courses of antibiotics that had no beneficial effect on his symptoms. He attended to the Medical Assessment Unit after a particularly bad episode of coughing having experienced blood stained sputum.

Investigations are as follows

Hb	10.4 g/dl
Platelets	460 * 10 ⁹ /l
WBC	16.4 * 10 ⁹ /l
Neutrophils	13.5 * 10 ⁹ /l
Lymphocytes	2.7 * 10 ⁹ /l

Na ⁺	134 mmol/l
K ⁺	4.2 mmol/l
Urea	7.4 mmol/l
Creatinine	106 µmol/l

Chest X-Ray

- Cavitating lesion in the right upper zone.
- No evidence of pleural effusion
- No other focal consolidation

CT Thorax

- Cavitating lesion with halo sign

Broncho-alveolar lavage induced sputum

- Hyphae seen on silver staining

What is the most likely diagnosis?

	Invasive Aspergillosis
	Allergic Bronchopulmonary Aspergillosis
	Aspergilloma
	Tuberculosis
	Post atypical pneumonia lung abscess

Dashboard

Overall score: 0%

1 -

□ Question 78 of 200

□ □

A 45 year old patient undergoing R-CHOP (Rituximab, Cyclophosphamide, Doxyrubicin, Vincristine and Prednisolone) chemotherapy for Non-Hodgkins Lymphoma presents with a progressive cough, rigors and fevers up to 39.4 degrees on his home thermometer. His GP had tried 2 courses of antibiotics that had no beneficial effect on his symptoms. He attended to the Medical Assessment Unit after a particularly bad episode of coughing having experienced blood stained sputum.

Investigations are as follows

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What is the most likely diagnosis?

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	Allergic Bronchopulmonary Aspergillosis
	Aspergilloma
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	Post atypical pneumonia lung abscess

Dashboard

Overall score: **0%**
1 -

□ Question 78 of 200

□ □

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CT Thorax

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Broncho-alveolar lavage induced sputum

- Hyphae seen on silver staining

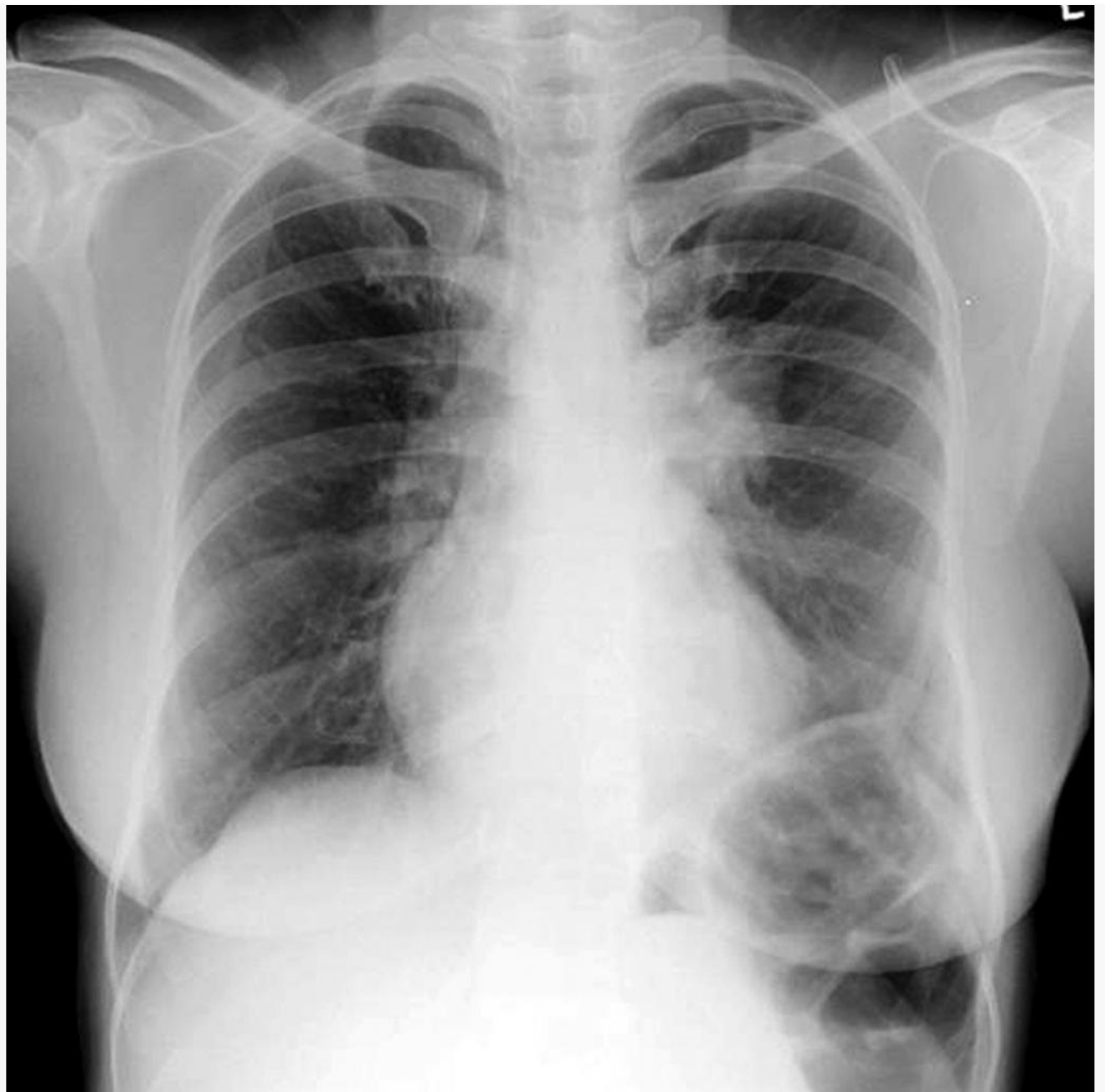
What is the most likely diagnosis?

	Invasive Aspergillosis
	Allergic Bronchopulmonary Aspergillosis
	Aspergilloma
	Tuberculosis
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Dashboard

Overall score: **0%**

1 -



□ Question 78 of 200

□ □

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Broncho-alveolar lavage induced sputum

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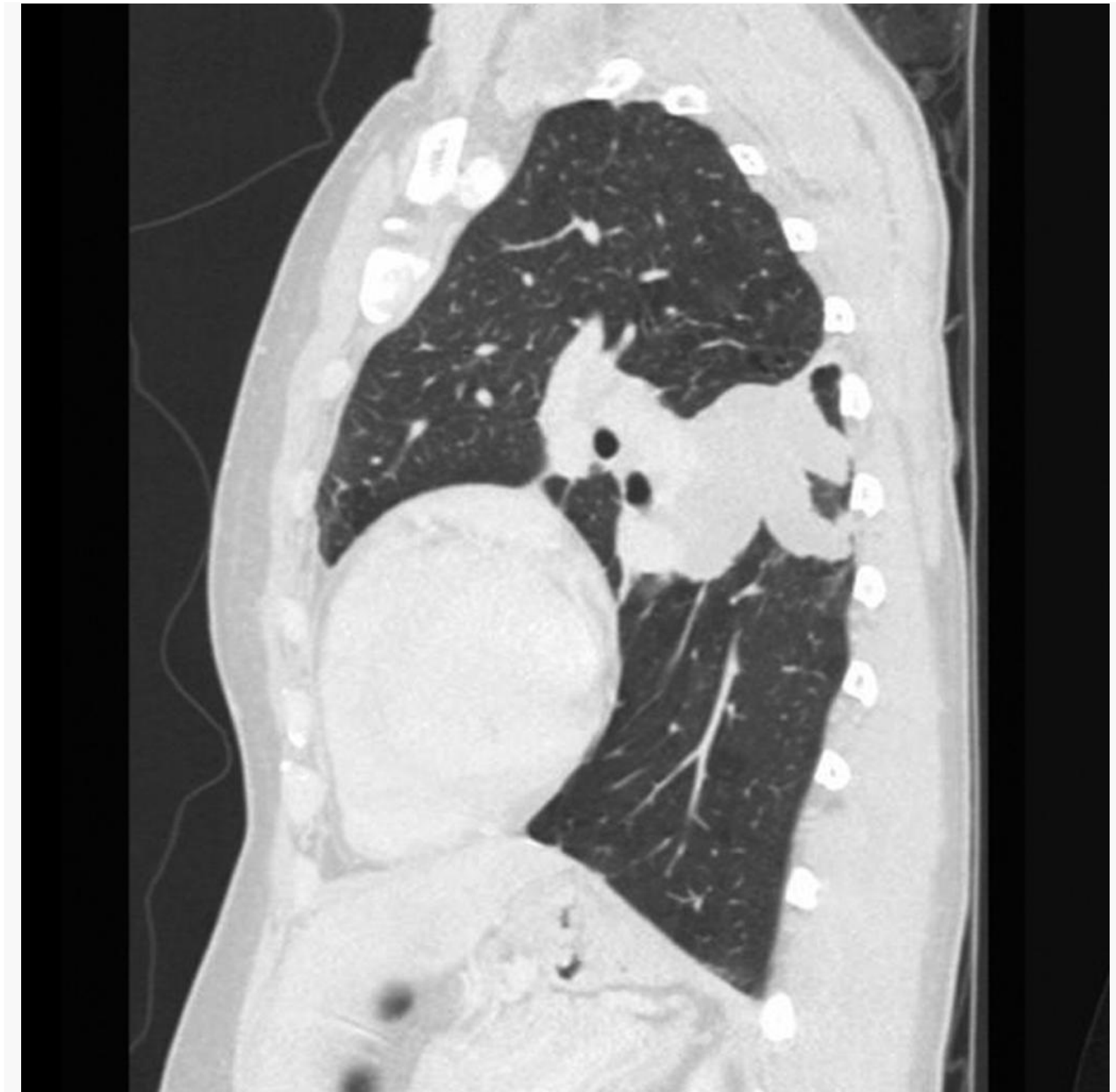
What is the most likely diagnosis?

	Invasive Aspergillosis
	Allergic Bronchopulmonary Aspergillosis
	Aspergilloma
	Tuberculosis
	Post atypical pneumonia lung abscess

Dashboard

Overall score: **0%**

1 -



Question 79 of 200



A 65-year-old female presents to respiratory outpatients with an 8-week history of gradually worsening shortness of breath. Her exercise tolerance has reduced to 50 yards from several miles; she reports chronic lower back pain but no other symptoms. Her past medical history includes type 2 diabetes mellitus, psoriasis, recurrent urinary tract infections and ischaemic heart disease. She currently takes metformin 500 mg BD, bisoprolol 2.5 mg OD, aspirin 75 mg OD, atorvastatin 40 mg ON, ramipril 2.5 mg and nitrofurantoin 50 mg ON with no change in the last 6 months. She has never smoked, has no pets and works as a secretary. On examination, the patient is breathless on minimal exertion. Observations are normal, there is no clubbing and she has fine end-inspiratory crepitations at both bases. A CT chest shows ground glass changes with minimal honey combing at both bases. What is the most likely cause of her underlying respiratory condition?

	Asbestosis
	Psoriasis
	Metformin
	Ankylosing spondylitis
	Nitrofurantoin

Dashboard

Overall score: 0%

1 -

Question 79 of 200



A 65-year-old female presents to respiratory outpatients with an 8-week history of gradually worsening shortness of breath. Her exercise tolerance has reduced to 50 yards from several miles; she reports chronic lower back pain but no other symptoms. Her past medical history includes type 2 diabetes mellitus, psoriasis, recurrent urinary tract infections and ischaemic heart disease. She currently takes metformin 500 mg BD, bisoprolol 2.5 mg OD, aspirin 75 mg OD, atorvastatin 40 mg ON, ramipril 2.5 mg and nitrofurantoin 50 mg ON with no change in the last 6 months. She has never smoked, has no pets and works as a secretary. On examination, the patient is breathless on minimal exertion. Observations are normal, there is no clubbing and she has fine end-inspiratory crepitations at both bases. A CT chest shows ground glass changes with minimal honey combing at both bases. What is the most likely cause of her underlying respiratory condition?

	Asbestosis
	Psoriasis
	Metformin
	Ankylosing spondylitis
	Nitrofurantoin

Dashboard

Overall score: 0%
1 -

Question 80 of 200

A 27-year-old woman presents for review to the respiratory clinic. She has a past medical history of cystic fibrosis and has been struggling at home. Her GP sent a sputum sample prior to her clinic appointment as he was concerned with the worsening nature of her cough and shortness of breath. Which microorganism is associated with the worst prognosis?

<input type="checkbox"/>	Burkholderia
<input type="checkbox"/>	Klebsiella pneumoniae
<input type="checkbox"/>	Pseudomonas aeruginosa
<input type="checkbox"/>	Staphylococcus aureus
<input type="checkbox"/>	Haemophilus influenzae

Dashboard

Overall score: 0%

1 -

□ Question 80 of 200

□ □

A 27-year-old woman presents for review to the respiratory clinic. She has a past medical history of cystic fibrosis and has been struggling at home. Her GP sent a sputum sample prior to her clinic appointment as he was concerned with the worsening nature of her cough and shortness of breath. Which microorganism is associated with the worst prognosis?

	Burkholderia
	Klebsiella pneumoniae
	Pseudomonas aeruginosa
	Staphylococcus aureus
	Haemophilus influenzae

Dashboard

Overall score: **0%****1** -

Question 81 of 200

□ □

A 75-year-old man is admitted to the Emergency Department with dyspnoea. A chest x-ray is performed upon arrival:



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What is the main finding on the film?

	Bronchiectasis
	Right sided pleural effusion
	Right upper lobe consolidation
	Pulmonary oedema

Dashboard

Overall score: 0%

1 -

Question 81 of 200

A 75-year-old man is admitted to the Emergency Department with dyspnoea. A chest x-ray is performed upon arrival:



© Image used on license from Radiopaedia

What is the main finding on the film?

	Bronchiectasis
	Right sided pleural effusion
	Right upper lobe consolidation
	Pulmonary oedema

Dashboard

Overall score: **0%**

1 -

□ Question 81 of 200

□ □

A 75-year-old man is admitted to the Emergency Department with dyspnoea. A chest x-ray is performed upon arrival:



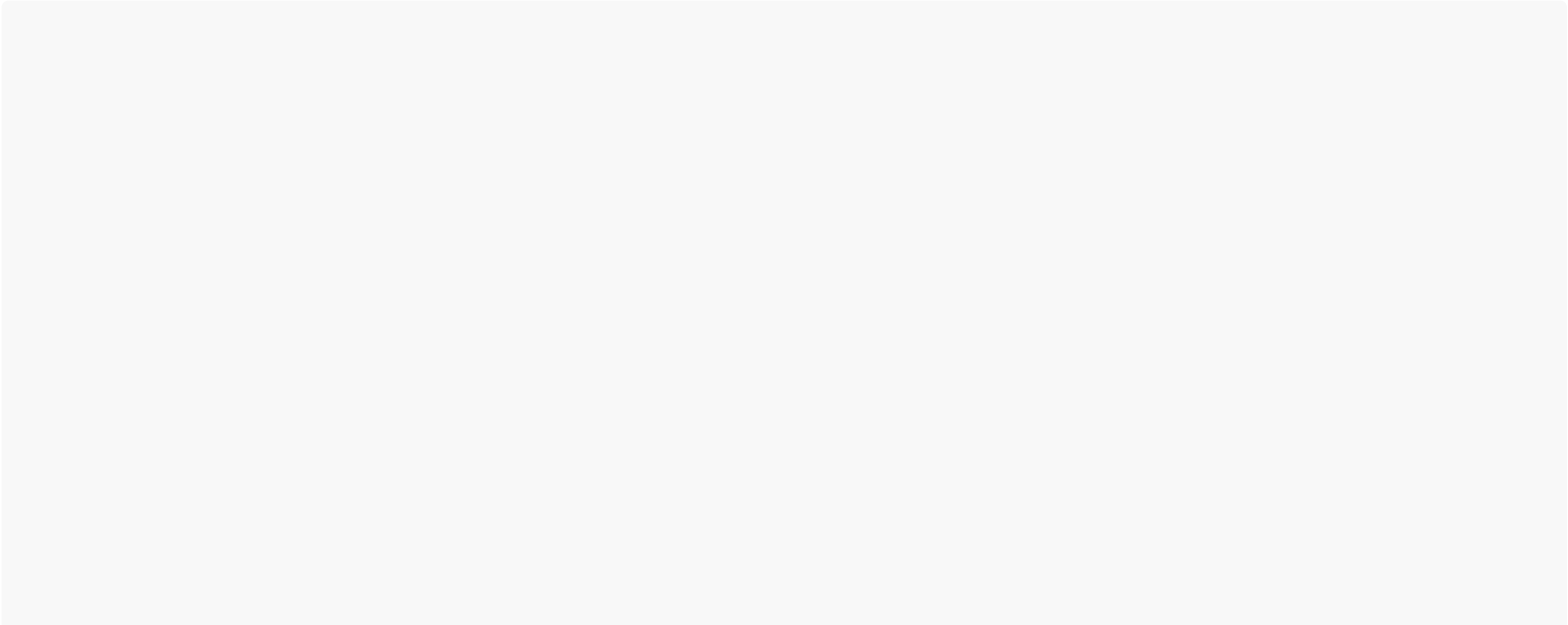
© Image used on license from Radiopaedia

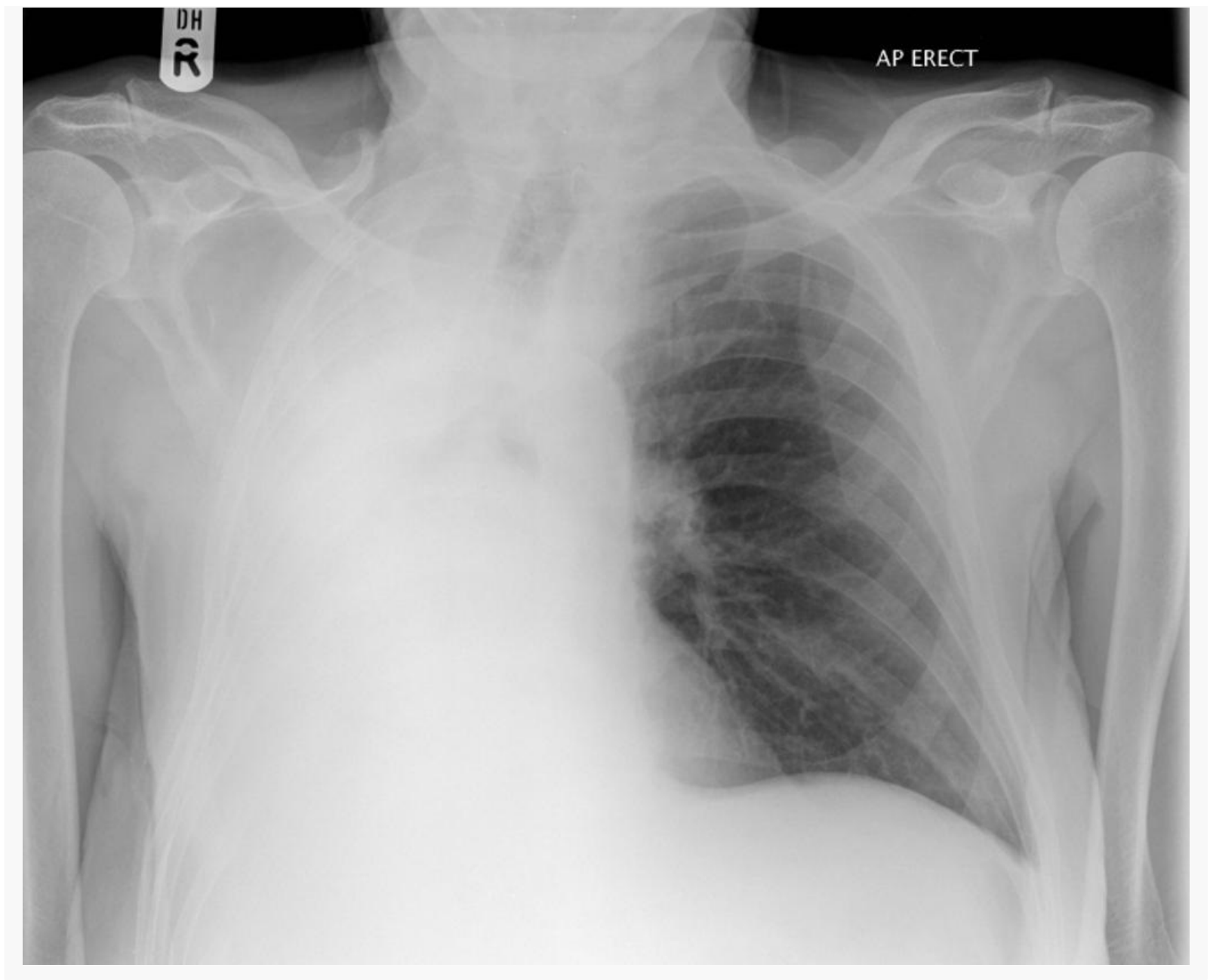
What is the main finding on the film?

	Bronchiectasis
	Right sided pleural effusion
	Right upper lobe consolidation
	Pulmonary oedema

Dashboard

Overall score: **0%**
1 -





□ Question 81 of 200

□ □

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© Image used on license from Radiopaedia

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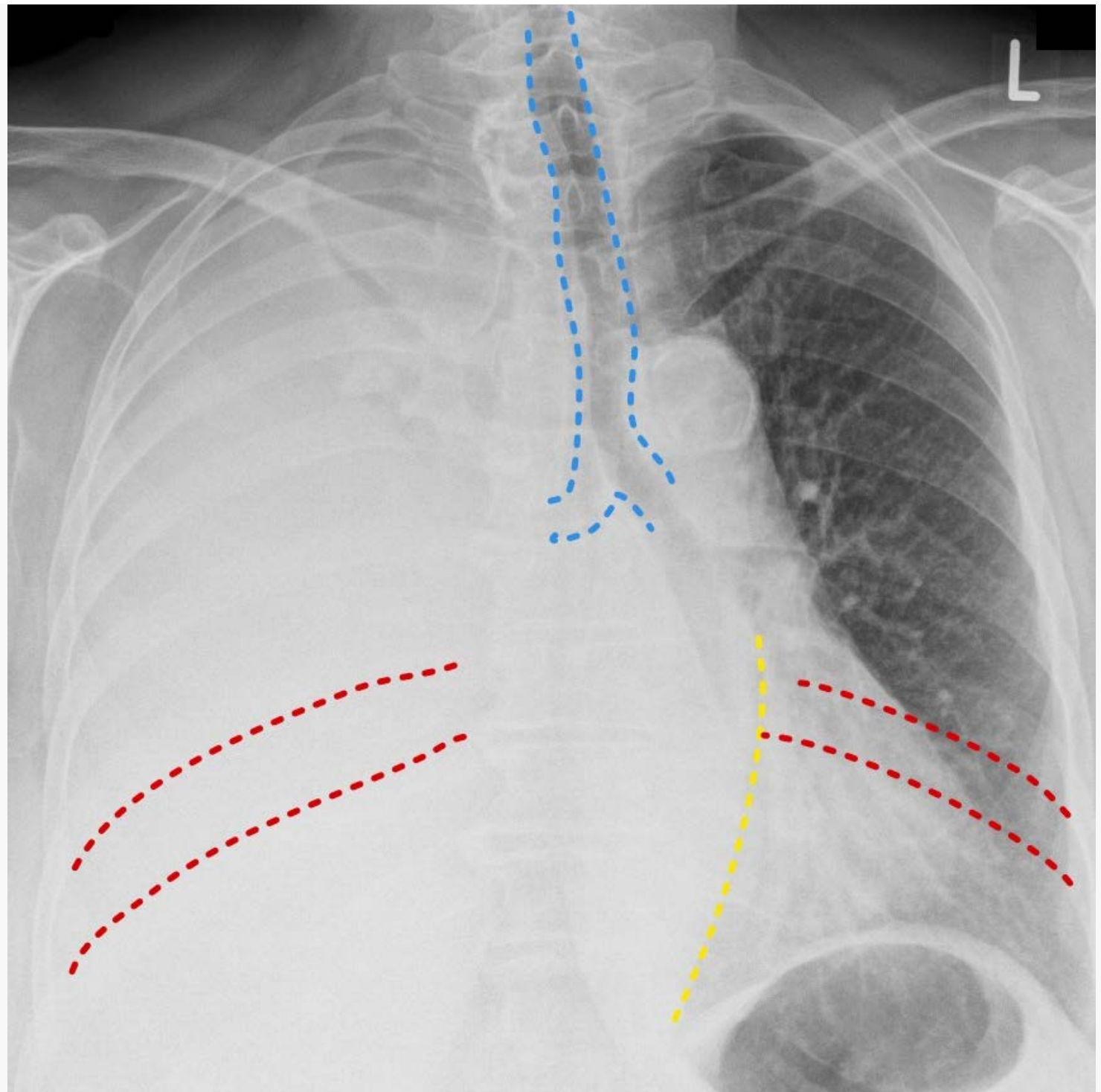
	Bronchiectasis
	Right sided pleural effusion
	Right upper lobe consolidation

	Pulmonary oedema
	Right middle lobe collapse

Dashboard

Overall score: **0%**

1 -



Question 82 of 200

□ □

A 25-year-old woman has presented for review of her asthma control. She states that her control has worsened recently and she is now using her Ventolin inhaler 1-2 times/week. She is not on any other medication for asthma control. She denies any recent illnesses but does indicate worsening of symptoms in cooler weather and during exercise. Which is the next best step?

	Oral prednisolone
	Inhaled beclometasone dipropionate
	Inhaled formoterol
	Inhaled salmeterol
	Leukotriene receptor antagonist

Dashboard

Overall score: **0%**

1 -

Question 82 of 200

□ □

A 25-year-old woman has presented for review of her asthma control. She states that her control has worsened recently and she is now using her Ventolin inhaler 1-2 times/week. She is not on any other medication for asthma control. She denies any recent illnesses but does indicate worsening of symptoms in cooler weather and during exercise. Which is the next best step?

	Oral prednisolone
	Inhaled beclometasone dipropionate
	Inhaled formoterol
	Inhaled salmeterol
	Leukotriene receptor antagonist

Dashboard

Overall score: **0%**

1 -

Question 83 of 200



A 30-year-old man was referred to his local hospital with a 7-day history of fever and dry cough. His General Practitioner had prescribed a course of amoxicillin but this had made no difference. Over the next few days the patient had got worse and developed a productive cough, diarrhoea and nausea. His girlfriend had also reported that the patient had been having rigors and had been confused. The patient smoked 15 cigarettes per day and drank approximately 30 units per week.

On examination he was confused and mildly jaundiced. Temperature was 39°C and respiratory rate was 30/min. Auscultation of the chest revealed scattered crackles in the right mid and lower zones. Abdominal and neurological examination was normal.

Investigations showed (normal values are shown in brackets):

Hb	10.4 g/dl
WCC	$10.6 \times 10^9/l$
Platelets	$180 \times 10^9/l$
Sodium	127 mmol/l
Potassium	3.6 mmol/l
Urea	7.0 mmol/l
Creatinine	115 mol/l
Bilirubin	44 μ mol/l
AST	200 iu/l
ALT	235 iu/l
Albumin	33 g/l

Arterial blood gases

pH	7.36 (7.35-7.45)
----	------------------

pO2	7.85 kPa (>10.6)
pCO2	5.6 kPa (4.7 -6)
HCO3	28 mmol/l (22-28)

Chest X-ray shows diffuse patchy shadowing in the right lung field

What is the most probable diagnosis?

	Chlamydia psittaci pneumonia
	Coxiella pneumonia
	Legionnaires disease
	Mycoplasma pneumonia
	Pneumococcal pneumonia

Dashboard

Overall score: 0%

1 -

□ Question 83 of 200



A 30-year-old man was referred to his local hospital with a 7-day history of fever and dry cough. His General Practitioner had prescribed a course of amoxicillin but this had made no difference. Over the next few days the patient had got worse and developed a productive cough, diarrhoea and nausea. His girlfriend had also reported that the patient had been having rigors and had been confused. The patient smoked 15 cigarettes per day and drank approximately 30 units per week.

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Arterial blood gases

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What is the most probable diagnosis?

	Chlamydia psittaci pneumonia
	Coxiella pneumonia
	Legionnaires disease
	Mycoplasma pneumonia
	Pneumococcal pneumonia

Dashboard

Overall score: **0%**

1 -

Question 83 of 200

A 30-year-old man was referred to you with a 2-week history of fever, malaise, and weight loss. He had been prescribed a course of amoxicillin for a respiratory infection 1 week prior to presentation. He had been having rigors and had lost 5 kg in the last 2 weeks.

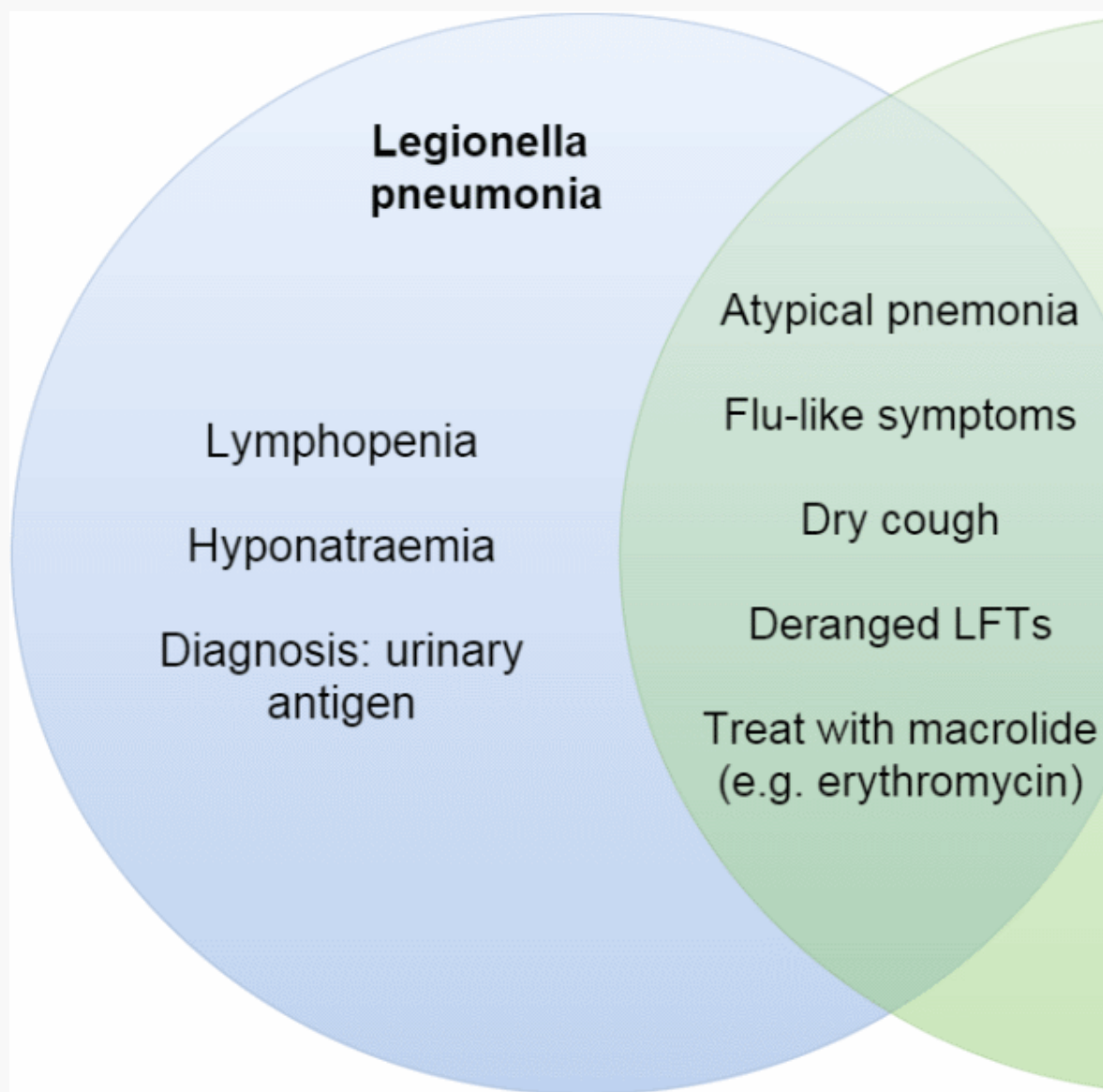
On examination he was conscious and oriented. Auscultation of the chest revealed crackles at the bases. Examination of the rest of the system was normal.

Investigations showed (normal ranges in parentheses):

Hb	10.4 g/dl
WCC	$10.6 \times 10^9/l$
Platelets	$180 \times 10^9/l$
Sodium	127 mmol/l
Potassium	3.6 mmol/l
Urea	7.0 mmol/l
Creatinine	115 mol/l
Bilirubin	44 μ mol/l
AST	200 iu/l
ALT	235 iu/l
Albumin	33 g/l

Arterial blood gases

pH	7.36 (7.35-7.45)
----	------------------



pO2	7.85 kPa (>10.6)
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Chest X-ray shows diffuse patchy shadowing in the right lung field

What is the most probable diagnosis?

	Chlamydia psittaci pneumonia
	Coxiella pneumonia
	Legionnaires disease
	Mycoplasma pneumonia
	Pneumococcal pneumonia

Dashboard

Overall score: **0%**

1 -

□ Question 83 of 200



A 30-year-old man was referred to his local hospital with a 7-day history of fever and dry cough. His General Practitioner had prescribed a course of amoxicillin but this had made no difference. Over the next few days the patient had got worse and developed a productive cough, diarrhoea and nausea. His girlfriend had also reported that the patient had been having rigors and had been confused. The patient smoked 15 cigarettes per day and drank approximately 30 units per week.

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Albumin	33 g/l

Arterial blood gases

pH	7.36 (7.35-7.45)
pO ₂	7.85 kPa (>10.6)

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Chest X-ray shows diffuse patchy shadowing in the right lung field

What is the most probable diagnosis?

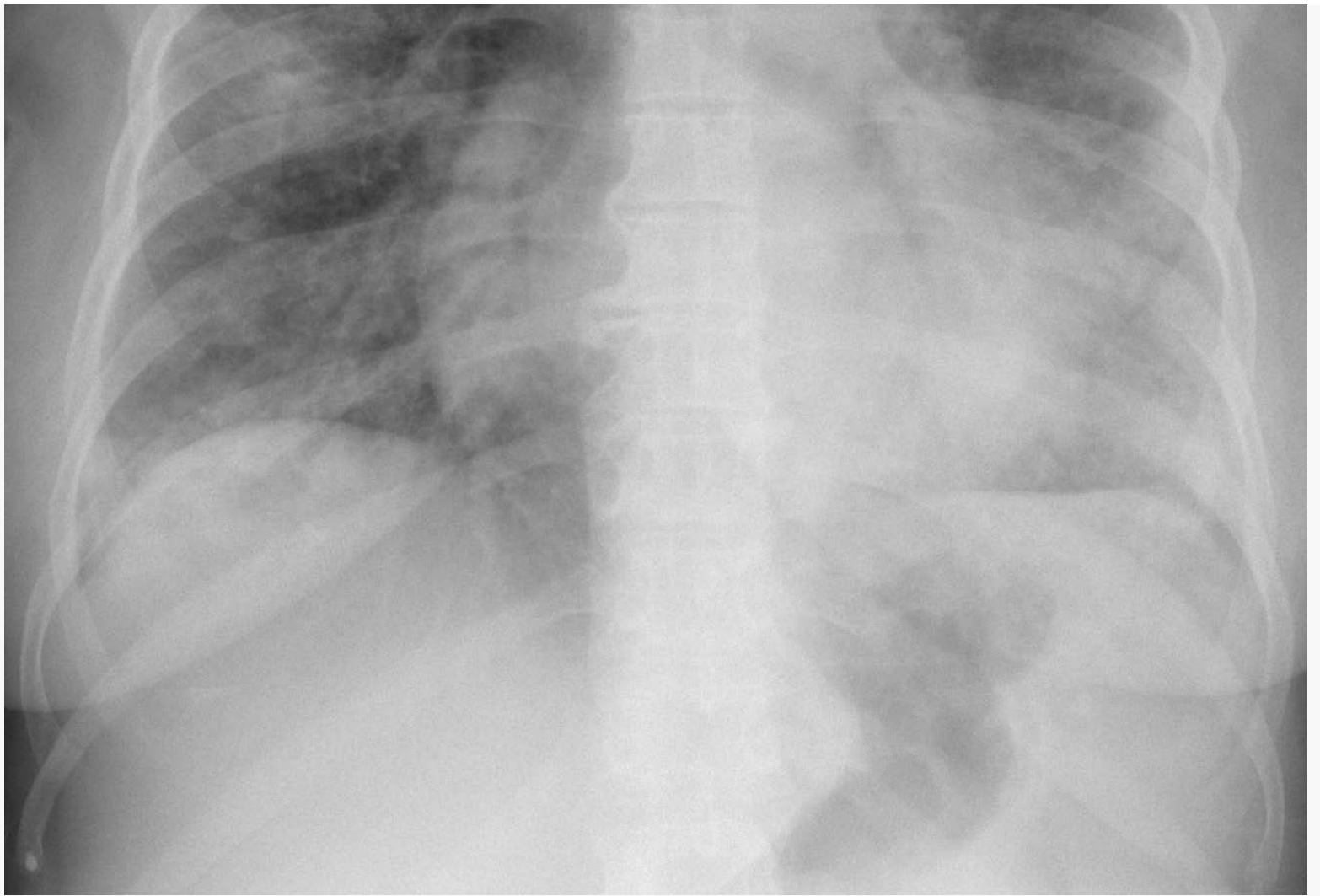
	Chlamydia psittaci pneumonia
	Coxiella pneumonia
	Legionnaires disease
	Mycoplasma pneumonia
	Pneumococcal pneumonia

Dashboard

Overall score: **0%**

1 -





□ Question 84 of 200

□ □

As the doctor on call you are called to review a 28-year-old male on the haematology ward. He recently underwent an allogenic stem cell transplant, which so far had been reasonably uncomplicated. Earlier in the week the patient had complained of coryzal symptoms and a dry cough. A nasopharyngeal aspirate (NPA) had been sent along with other routine tests 24 hours ago.

When you arrive to review the patient on the ward you note that he appears extremely sweaty. You take his temperature using a tympanic thermometer which reads 39.5°C. His heart rate is 95 beats per minute and his respiratory rate is 16 breaths per minute. Blood pressure is 122/76 mmHg. Physical examination is unremarkable and chest X-ray reveals clear lung fields.

You review the patients most recent results:

Hb	95 g/l	Na ⁺	134 mmol/l
Platelets	50 * 10 ⁹ /l	K ⁺	3.6 mmol/l
WBC	0.1 * 10 ⁹ /l	Urea	3.0 mmol/l
Neuts	0.1 * 10 ⁹ /l	Creatinine	65 µmol/l
Lymphs	0.0 * 10 ⁹ /l	CRP	12 mg/l
Eosin	0.0 * 10 ⁹ /l		
NPA	Influenza A		

What is the most appropriate treatment to commence?

	Amoxicillin
	Oseltamivir
	No treatment required
	Flucloxacillin

	Zanamivir
--	-----------

Dashboard

Overall score: **0%**
1 -

□ Question 84 of 200

□ □

As the doctor on call you are called to review a 28-year-old male on the haematology ward. He recently underwent an allogenic stem cell transplant, which so far had been reasonably uncomplicated. Earlier in the week the patient had complained of coryzal symptoms and a dry cough. A nasopharyngeal aspirate (NPA) had been sent along with other routine tests 24 hours ago.

When you arrive to review the patient on the ward you note that he appears extremely sweaty. You take his temperature using a tympanic thermometer which reads 39.5°C. His heart rate is 95 beats per minute and his respiratory rate is 16 breaths per minute. Blood pressure is 122/76 mmHg. Physical examination is unremarkable and chest X-ray reveals clear lung fields.

You review the patients most recent results:

Hb	95 g/l	Na ⁺	134 mmol/l
Platelets	50 * 10 ⁹ /l	K ⁺	3.6 mmol/l
WBC	0.1 * 10 ⁹ /l	Urea	3.0 mmol/l
Neuts	0.1 * 10 ⁹ /l	Creatinine	65 µmol/l
Lymphs	0.0 * 10 ⁹ /l	CRP	12 mg/l
Eosin	0.0 * 10 ⁹ /l		
NPA	Influenza A		

What is the most appropriate treatment to commence?

	Amoxicillin
	Oseltamivir
	No treatment required
	Flucloxacillin

Zanamivir

Dashboard

Overall score: **0%**

1 -

□ Question 85 of 200



A 51-year-old lady is admitted to the Medical Admissions Unit with a 2-week history of fever, breathlessness, lethargy and fatigue.

She has a history of poorly controlled asthma which has caused her to attend the Emergency Department five times over the past 2 years. She was reviewed by the respiratory team during her last admission and started on reducing dose oral prednisolone. However, she was unable to reduce her dose below 10mg per day due to recurrent breathlessness and wheeze.

She was reviewed again in the Respiratory Clinic 4 months ago and started on montelukast 10mg per day as a steroid-sparing therapy. Her prednisolone was subsequently reduced to 5mg per day and she reports that she had been well since then.

Her past medical history is otherwise remarkable for sinusitis and nasal polyposis. She has had several surgeries for the latter. Her current medications include Seretide 500/50 1 puff twice daily, montelukast 10mg once daily, prednisolone 5mg once daily and salbutamol via MDI as required. She is allergic to aspirin.

On examination, her temperature is 37.6°C, her pulse is 98bpm and her blood pressure is 164/91mmHg. Her respiratory rate is 22/min and her oxygen saturations are 93% breathing room air. Her JVP is elevated at 5cm. Auscultation of the chest reveals diffuse polyphonic wheeze and bibasal crackles extending to the mid-zones. There is mild ankle oedema. Her abdomen is soft and non-tender.

Her initial investigations are as follows:

Hb	112 g/l	Na ⁺	136 mmol/l
Platelets	215 * 10 ⁹ /l	K ⁺	5.9 mmol/l
WBC	14.2 * 10 ⁹ /l	Urea	22.3 mmol/l
Neuts	8.4 * 10 ⁹ /l	Creatinine	484 µmol/l
Lymphs	2.1 * 10 ⁹ /l	CRP	107 mg/l
Eosin	3.4 * 10 ⁹ /l		

Urine dipstick | Blood + + + protein + +

What would be the most likely finding on renal biopsy?

	Mesangial hypercellularity
	Pauci-immune crescentic glomerulonephritis
	Podocyte fusion
	Thickened capillary walls with subepithelial deposits
	Diffuse proliferative glomerulonephritis

Dashboard

Overall score: **0%**

1 -

□ Question 85 of 200



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She has a history of poorly controlled asthma which has caused her to attend the Emergency Department five times over the past 2 years. She was reviewed by the respiratory team during her last admission and started on reducing dose oral prednisolone. However, she was unable to reduce her dose below 10mg per day due to recurrent breathlessness and wheeze.

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Urine dipstick Blood +++ protein ++

What would be the most likely finding on renal biopsy?

	Mesangial hypercellularity
	Pauci-immune crescentic glomerulonephritis
	Podocyte fusion
	Thickened capillary walls with subepithelial deposits
	Diffuse proliferative glomerulonephritis

Dashboard

Overall score: **0%**

1 -

Question 85 of 200

A 51-year-old lady is admitted to hospital with cough and fatigue.

She has a history of poorly controlled asthma over the past 2 years. She was treated with inhaled corticosteroids and prednisolone. However, she has recently developed wheeze.

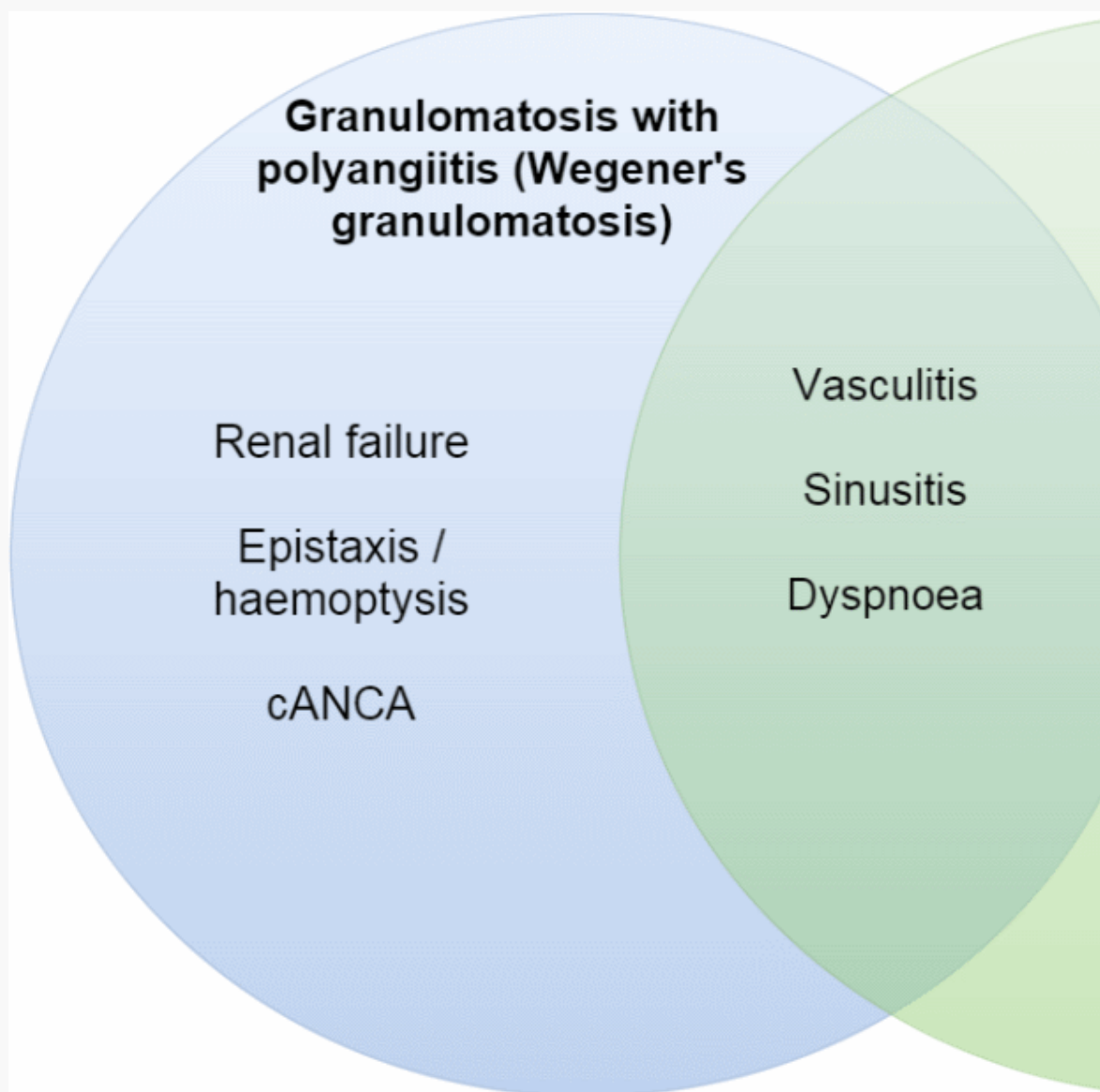
She was reviewed again in the outpatient clinic for tapering therapy. Her prednisolone was stopped since then.

Her past medical history is clear apart from asthma. Her current medications are inhaled corticosteroids 5mg once daily and salbutamol 2 puffs as required.

On examination, her temperature is 37.6°C, her pulse is 98bpm and her blood pressure is 164/91mmHg. Her respiratory rate is 22/min and her oxygen saturations are 93% breathing room air. Her JVP is elevated at 5cm. Auscultation of the chest reveals diffuse polyphonic wheeze and bibasal crackles extending to the mid-zones. There is mild ankle oedema. Her abdomen is soft and non-tender.

Her initial investigations are as follows:

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Eosin	3.4 * 10 ⁹ /l		



Urine dipstick Blood + + + protein + +

What would be the most likely finding on renal biopsy?

	Mesangial hypercellularity
	Pauci-immune crescentic glomerulonephritis
	Podocyte fusion
	Thickened capillary walls with subepithelial deposits
	Diffuse proliferative glomerulonephritis

Dashboard

Overall score: **0%**

1 -

□ Question 86 of 200

□ □

A 64-year-old man presents to the respiratory clinic for review. He has been diagnosed with idiopathic pulmonary fibrosis which has not responded to a course of oral corticosteroids. He is finding it difficult to manage the stairs more than once per day and is finding it difficult to get out of the house. On examination his blood pressure is 138/88 mmHg, his pulse is 80 beats per minute and regular. There are inspiratory crackles on auscultation of the chest consistent with pulmonary fibrosis, and his O2 saturation is 92% at rest. His FVC is 65% of predicted. Which of the following is the next most appropriate intervention?

	Cyclophosphamide
	Infliximab
	Methotrexate
	Nintedanib
	Rituximab

Dashboard

Overall score: 0%

1 -

□ Question 86 of 200

□ □

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	Infliximab
	Methotrexate
	Nintedanib
	Rituximab

Dashboard

Overall score: **0%****1** -

□ Question 86 of 200

□ □

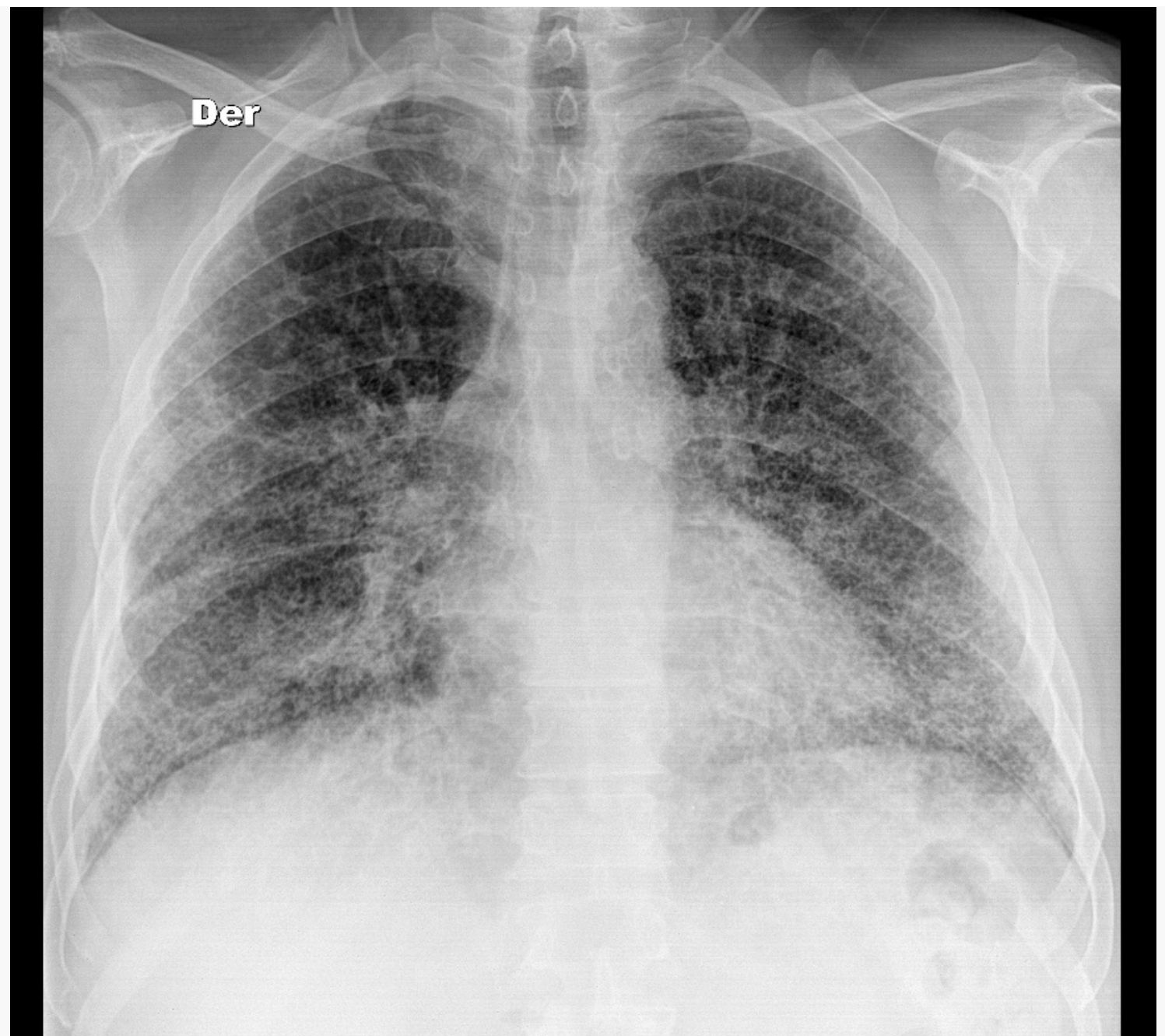
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	Methotrexate
	Nintedanib
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Dashboard

Overall score: 0%

1 -



□ Question 86 of 200

□ □

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	Nintedanib
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Dashboard

Overall score: 0%

1 -



Question 86 of 200



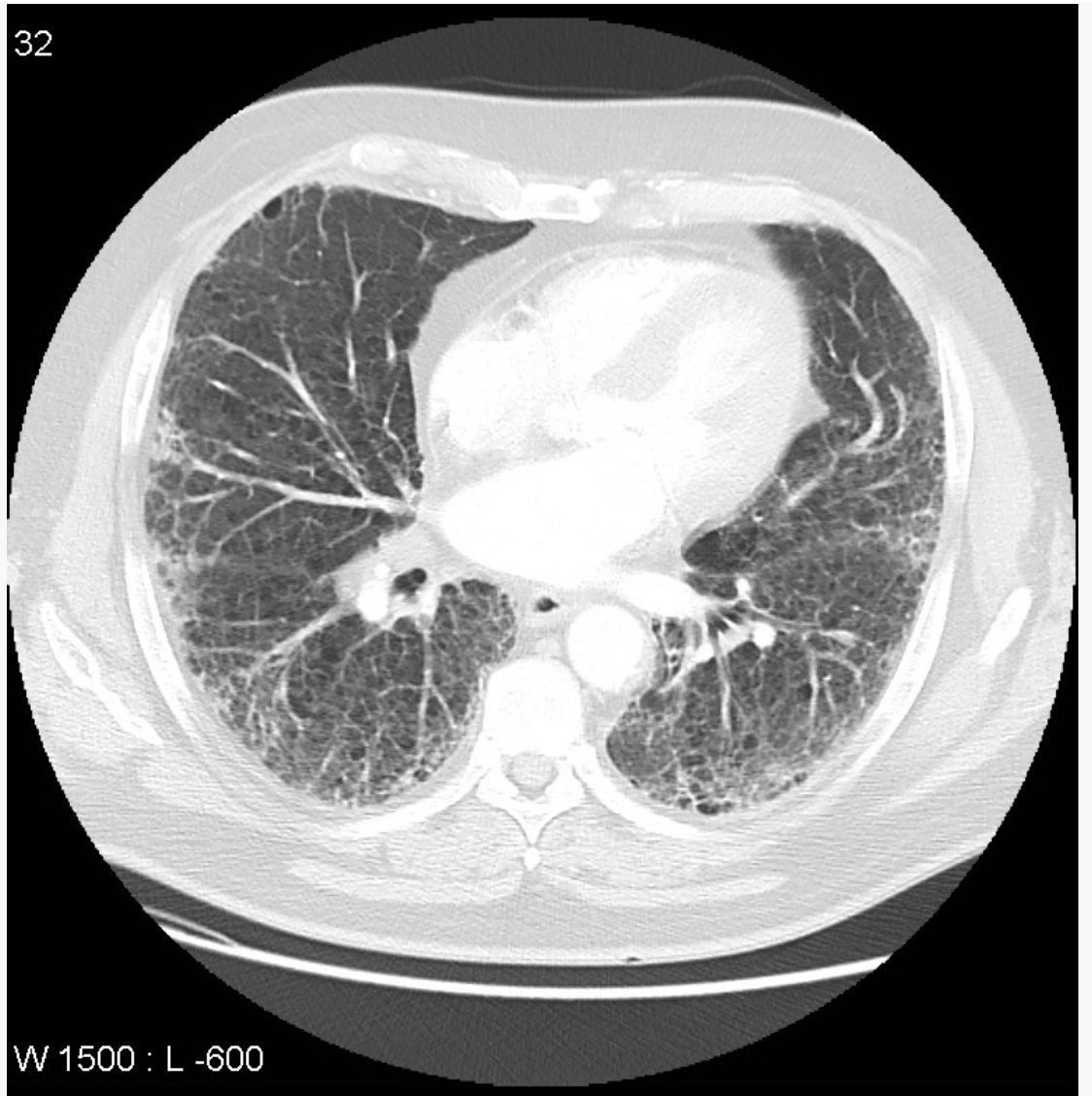
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	Cyclophosphamide
	Infliximab
	Methotrexate
	Nintedanib
	Rituximab

Dashboard

Overall score: 0%

1 -



W 1500 : L -600

Question 87 of 200

□ □

A 65-year-old man, originally from Pakistan is referred to the rapid access chest clinic by his GP with a one month history of weight loss (of roughly 5 kg) and a dry, irritating cough. Over the past two days he has started to have loss of sensation in both of his feet and lower legs.

Examination reveals heart sounds 1 and 2 present with no added sounds, reduced air entry in the mid and lower left zones of the chest, a non-tender liver edge that extends 3cm below the costal margin and loss of sensation for pain, light touch and temperature in both feet up to the mid shin.

A chest X-ray is performed which shows a unilateral hilar mass, but no other consolidation or features. His past medical history includes mild hypertension and diabetes mellitus which is diet-controlled. His only medication is enalapril for his hypertension. Bloods reveal no obvious abnormality.

What is the most likely diagnosis?

	Squamous cell carcinoma
	Small cell carcinoma
	Adenocarcinoma
	Tuberculosis
	Sarcoidosis

Dashboard

Overall score: 0%

1 -

Question 87 of 200

□ □

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What is the most likely diagnosis?

	Squamous cell carcinoma
	Small cell carcinoma
	Adenocarcinoma
	Tuberculosis
	Sarcoidosis

Dashboard

Overall score: **0%**

1 -

□ Question 88 of 200

□ □

A 54-year-old gentleman is investigated following complaints of frothy urine. Investigations show proteinuria and mild kidney injury, but normal full blood count, liver function tests, inflammatory markers and an ultrasound scan of the kidneys. During examination, he found to have a systolic murmur on the left sternal edge. A transthoracic echocardiogram demonstrates a left ventricular ejection fraction of 55%, normal valves, and increased thickness of the left ventricle to 16mm. In addition, there is a 2mm pericardial effusion and ground-glass changes of the left ventricle. He has no chest pain or shortness of breath. What is the most likely explanation of these echocardiogram findings?

	Cor pulmonale
	Myocarditis
	Mitochondrial disease
	Type 2 diabetes mellitus
	Amyloidosis

Dashboard

Overall score: 0%

1 -

□ Question 88 of 200

□ □

A 54-year-old gentleman is investigated following complaints of frothy urine. Investigations show proteinuria and mild kidney injury, but normal full blood count, liver function tests, inflammatory markers and an ultrasound scan of the kidneys. During examination, he found to have a systolic murmur on the left sternal edge. A transthoracic echocardiogram demonstrates a left ventricular ejection fraction of 55%, normal valves, and increased thickness of the left ventricle to 16mm. In addition, there is a 2mm pericardial effusion and ground-glass changes of the left ventricle. He has no chest pain or shortness of breath. What is the most likely explanation of these echocardiogram findings?

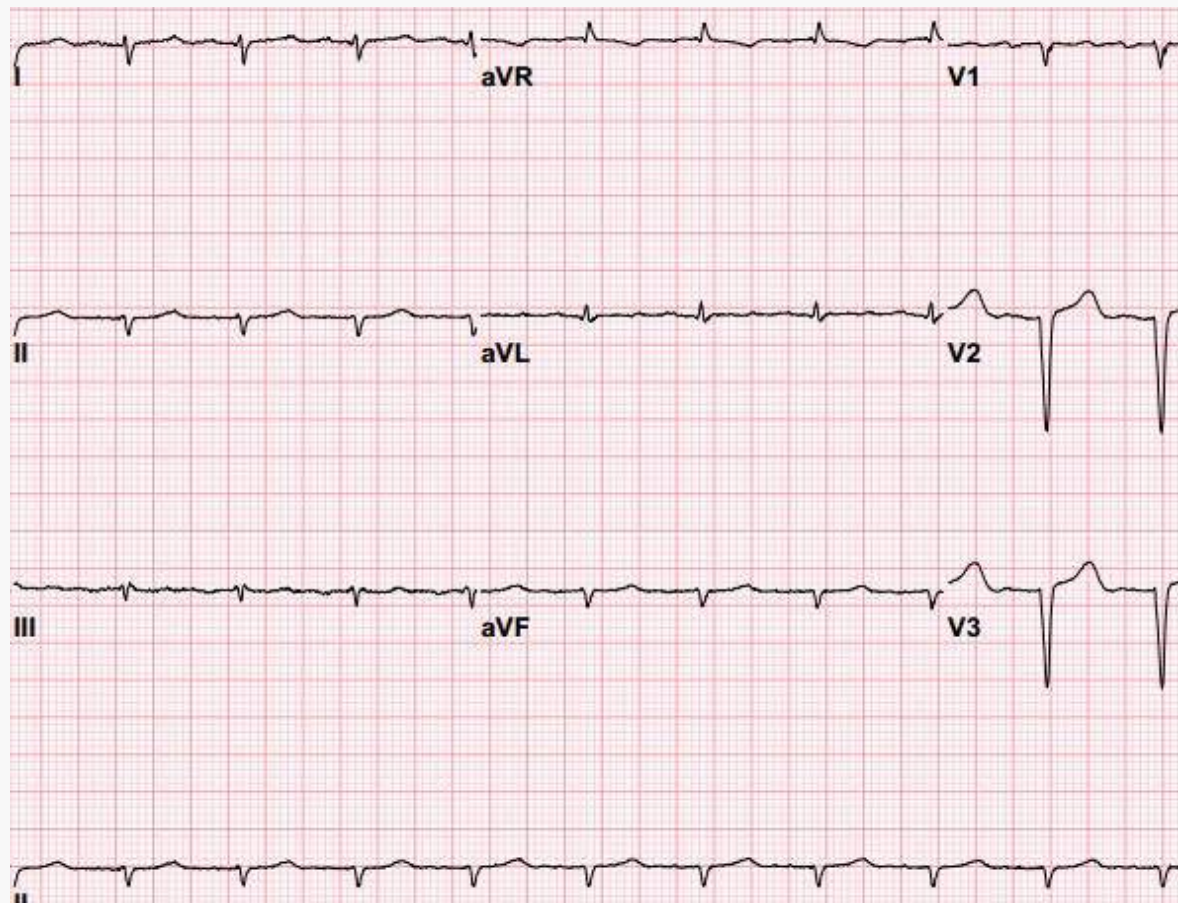
	Cor pulmonale
	Myocarditis
	Mitochondrial disease
	Type 2 diabetes mellitus
	Amyloidosis

Dashboard

Overall score: **0%****1** -

Question 88 of 200

A 54-year-old gentleman is admitted with a 2-week history of breathlessness and lower limb swelling. He has a history of chronic kidney injury, but normal full blood count. During examination, his jugular venous pressure is raised. Echocardiogram demonstrates a dilated left ventricle to 16mm. In addition, he has no chest pain or shortness of breath.



Cor pulmonale

Myocarditis

Mitochondrial disease

Type 2 diabetes mellitus

Amyloidosis

Dashboard

Overall score: 0%

1 -

Question 89 of 200

□ □

A 54-year-old man presents to the respiratory clinic. He was found to have three pleural plaques on a chest X-ray when being screened for tuberculosis due to immigration purposes. He worked as a builder for four years 21 years ago. He has no shortness of breath or chest pain. A diagnosis of benign pleural disease is made. He is keen to seek compensation. What is the most appropriate advice?

	Seek compensation by criminal law suit
	Seek compensation by civil law suit
	Seek compensation via GP
	Seek compensation via department of social security
	Unlikely to receive compensation currently

Dashboard

Overall score: 0%

1 -

Question 89 of 200

A 54-year-old man presents to the respiratory clinic. He was found to have three pleural plaques on a chest X-ray when being screened for tuberculosis due to immigration purposes. He worked as a builder for four years 21 years ago. He has no shortness of breath or chest pain. A diagnosis of benign pleural disease is made. He is keen to seek compensation. What is the most appropriate advice?

<input type="radio"/>	Seek compensation by criminal law suit
<input type="radio"/>	Seek compensation by civil law suit
<input type="radio"/>	Seek compensation via GP
<input type="radio"/>	Seek compensation via department of social security
<input checked="" type="radio"/>	Unlikely to receive compensation currently

Dashboard

Overall score: **0%**

1 -

Question 90 of 200

□ □

A 55-year-old man presented with history of progressive dyspnoea and dry cough for the past 3 years. In the past, he had exposure to asbestos when he worked in a chemical plant for 20 years, which he ceased 10 years ago. He was an ex-smoker with 40 pack years history. He quit smoking 2 years ago.

On examination, there were crackles in bilateral infrascapular area.

Computed tomogram (CT) of the chest showed honeycombing, thickening of interlobular and intralobular septa, diffuse pleural thickening, parenchymal bands, rounded atelectasis and calcified pleural plaques. Pulmonary function tests suggested restrictive ventilatory disease of moderate severity with moderate impairment of diffusion capacity.

What is the appropriate management for this case?

	Steroids
	Azathioprine
	Steroids plus azathioprine
	Anti-fibrotic agents
	Conservative management plus medical surveillance

Dashboard

Overall score: 0%

1 -

Question 90 of 200

□ □

A 55-year-old man presented with history of progressive dyspnoea and dry cough for the past 3 years. In the past, he had exposure to asbestos when he worked in a chemical plant for 20 years, which he ceased 10 years ago. He was an ex-smoker with 40 pack years history. He quit smoking 2 years ago.

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What is the appropriate management for this case?

	Steroids
	Azathioprine
	Steroids plus azathioprine
	Anti-fibrotic agents
	Conservative management plus medical surveillance

Dashboard

Overall score: **0%**

1 -

□ Question 91 of 200

□ □

A 67-year-old gentleman presents to the respiratory clinic via the 2-week rule. He presented to his general practitioner with haemoptysis and a persistent cough. On examination in the clinic, you observe that his clothes are loosely fitted. Chest percussion reveals left upper zone dullness. Chest X-ray confirms the presence of a left upper zone mass. After discussion with your consultant an urgent staging Computerised Tomography (CT) is arranged which unfortunately confirms a large left upper zone mass, mediastinal lymph node involvement and hepatocellular metastases. His performance status is 1. Hyponatraemia is noted on the bloods you requested in the clinic.

Na ⁺	126 mmol/l
K ⁺	4.1 mmol/l
Urea	7.5 mmol/l
Creatinine	91 µmol/l

In the context of the most likely diagnosis and staging, what would be the most appropriate treatment option?

	Lobectomy
	Partial pneumonectomy
	Palliation
	Chemotherapy
	Radiotherapy

Dashboard

Overall score: 0%

1 -

□ Question 91 of 200

□ □

A 67-year-old gentleman presents to the respiratory clinic via the 2-week rule. He presented to his general practitioner with haemoptysis and a persistent cough. On examination in the clinic, you observe that his clothes are loosely fitted. Chest percussion reveals left upper zone dullness. Chest X-ray confirms the presence of a left upper zone mass. After discussion with your consultant an urgent staging Computerised Tomography (CT) is arranged which unfortunately confirms a large left upper zone mass, mediastinal lymph node involvement and hepatocellular metastases. His performance status is 1. Hyponatraemia is noted on the bloods you requested in the clinic.

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	Lobectomy
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Dashboard

Overall score: 0%

1 -

Question 91 of 200



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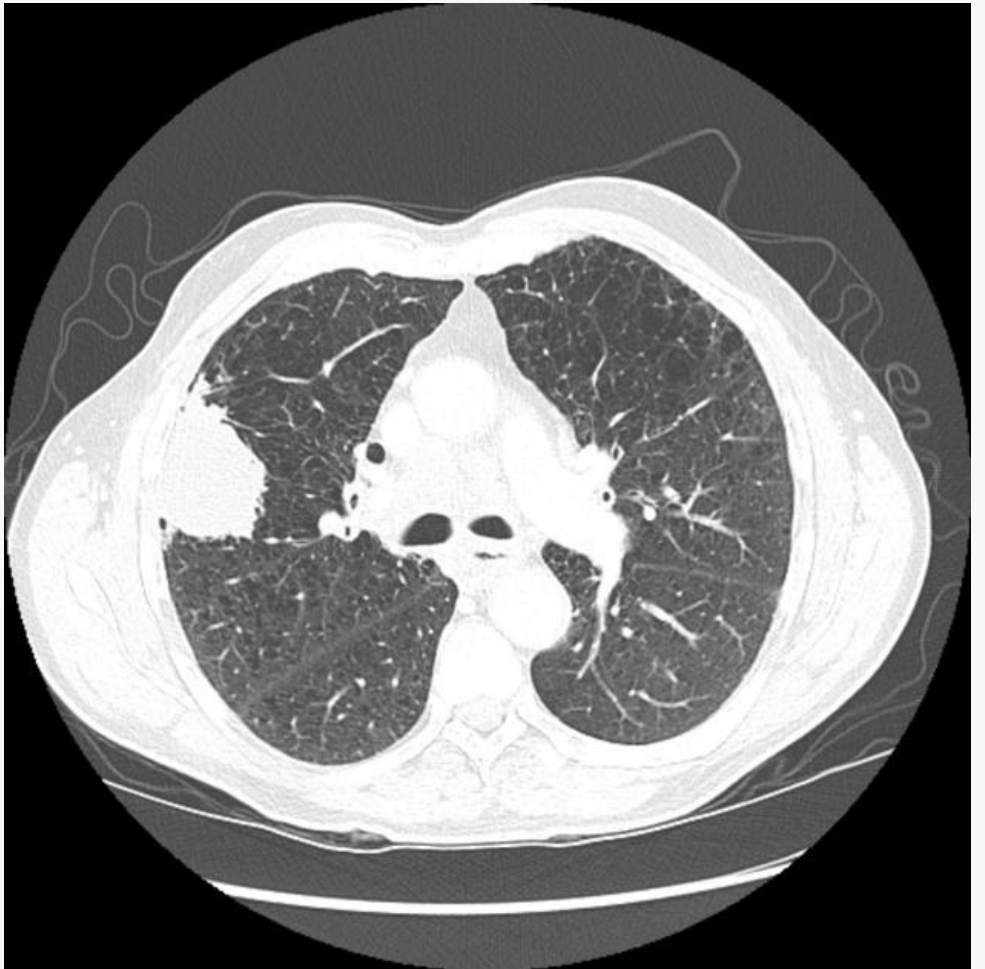
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K ⁺	4.1 mmol/l
Urea	7.5 mmol/l
Creatinine	91 µmol/l

In the context of the most likely diagnosis and staging, what would be the most appropriate treatment option?

	Lobectomy
	Partial pneumonectomy
	Palliation
	Chemotherapy
	Radiotherapy

Dashboard

Overall score: 0%
1 -



Question 92 of 200

A 60-year-old male presents with left sided pleuritic chest pain but is otherwise well. He smokes 30 cigarettes a day, having started at age 16. Chest X-ray and CT-pulmonary angiogram are normal which exclude pulmonary embolism and pneumothorax and are grossly normal except a 6mm left lung nodule in the left lung. What is your next step?

<input type="checkbox"/>	No further investigation required
<input type="checkbox"/>	Observe with CT scan at 6 months
<input type="checkbox"/>	Biopsy
<input type="checkbox"/>	PET scan
<input type="checkbox"/>	Bronchoscopy

Dashboard

Overall score: **0%**

1 -

Question 92 of 200

□ □

A 60-year-old male presents with left sided pleuritic chest pain but is otherwise well. He smokes 30 cigarettes a day, having started at age 16. Chest X-ray and CT-pulmonary angiogram are normal which exclude pulmonary embolism and pneumothorax and are grossly normal except a 6mm left lung nodule in the left lung. What is your next step?

	No further investigation required
	Observe with CT scan at 6 months
	Biopsy
	PET scan
	Bronchoscopy

Dashboard

Overall score: **0%**

1 -

□ Question 93 of 200

□ □

A 70-year-old woman presents to her GP with increasing shortness of breath over the last 4 months. She also reports an occasional productive cough. Her past medical history includes two previous heart attacks, both treated with percutaneous coronary intervention and hypercholesterolaemia that is treated with simvastatin. She has a 35 pack-year history and does not drink alcohol.

The GP refers her for lung function tests which reveal:

Forced expiratory volume in 1 second (FEV1)	0.78L
Forced vital capacity (FVC)	1.68L
Total lung capacity	5.08L

What is the most likely diagnosis?

	Chronic obstructive pulmonary disease (COPD)
	Congestive cardiac failure
	Pulmonary embolism
	Bronchiectasis
	Asthma

Dashboard

Overall score: 0%

1 -

□ Question 93 of 200

□ □

A 70-year-old woman presents to her GP with increasing shortness of breath over the last 4 months. She also reports an occasional productive cough. Her past medical history includes two previous heart attacks, both treated with percutaneous coronary intervention and hypercholesterolaemia that is treated with simvastatin. She has a 35 pack-year history and does not drink alcohol.

The GP refers her for lung function tests which reveal:

Forced expiratory volume in 1 second (FEV1)	0.78L
Forced vital capacity (FVC)	1.68L
Total lung capacity	5.08L

What is the most likely diagnosis?

	Chronic obstructive pulmonary disease (COPD)
	Congestive cardiac failure
	Pulmonary embolism
	Bronchiectasis
	Asthma

Dashboard

Overall score: **0%**

1 -

□ Question 94 of 200

□ □

A 46-year-old man presents with a persistent cough. This has been present for around 2 months and is productive of yellow-green sputum. He feels more short-of-breath on exertion but is experiencing chest pain. He has not lost any weight and has not coughed up blood.

He has a 25-pack-year history of smoking although is trying to give up. He does not drink alcohol.

On examination his respiratory rate is 18/min, heart rate 84/min, blood pressure 114/72 mmHg and temperature 37.3°C. His oxygen saturations on room air are 96%. Scattered crackles are heard in both bases.

A chest x-ray is requested:



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What is the most likely diagnosis?

	Pneumonia
	Sarcoidosis
	Chronic obstructive pulmonary disease
	Bronchiectasis
	Pulmonary fibrosis

Dashboard

Overall score: **0%**

1 -

□ Question 94 of 200

□ □

A 46-year-old man presents with a persistent cough. This has been present for around 2 months and is productive of yellow-green sputum. He feels more short-of-breath on exertion but is experiencing chest pain. He has not lost any weight and has not coughed up blood.

He has a 25-pack-year history of smoking although is trying to give up. He does not drink alcohol.

On examination his respiratory rate is 18/min, heart rate 84/min, blood pressure 114/72 mmHg and temperature 37.3°C. His oxygen saturations on room air are 96%. Scattered crackles are heard in both bases.

A chest x-ray is requested:



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What is the most likely diagnosis?

	Pneumonia
	Sarcoidosis
	Chronic obstructive pulmonary disease
	Bronchiectasis
	Pulmonary fibrosis

Dashboard

Overall score: **0%**

1 -

Question 94 of 200

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	Pneumonia
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	Chronic obstructive pulmonary disease
	Bronchiectasis
	Pulmonary fibrosis

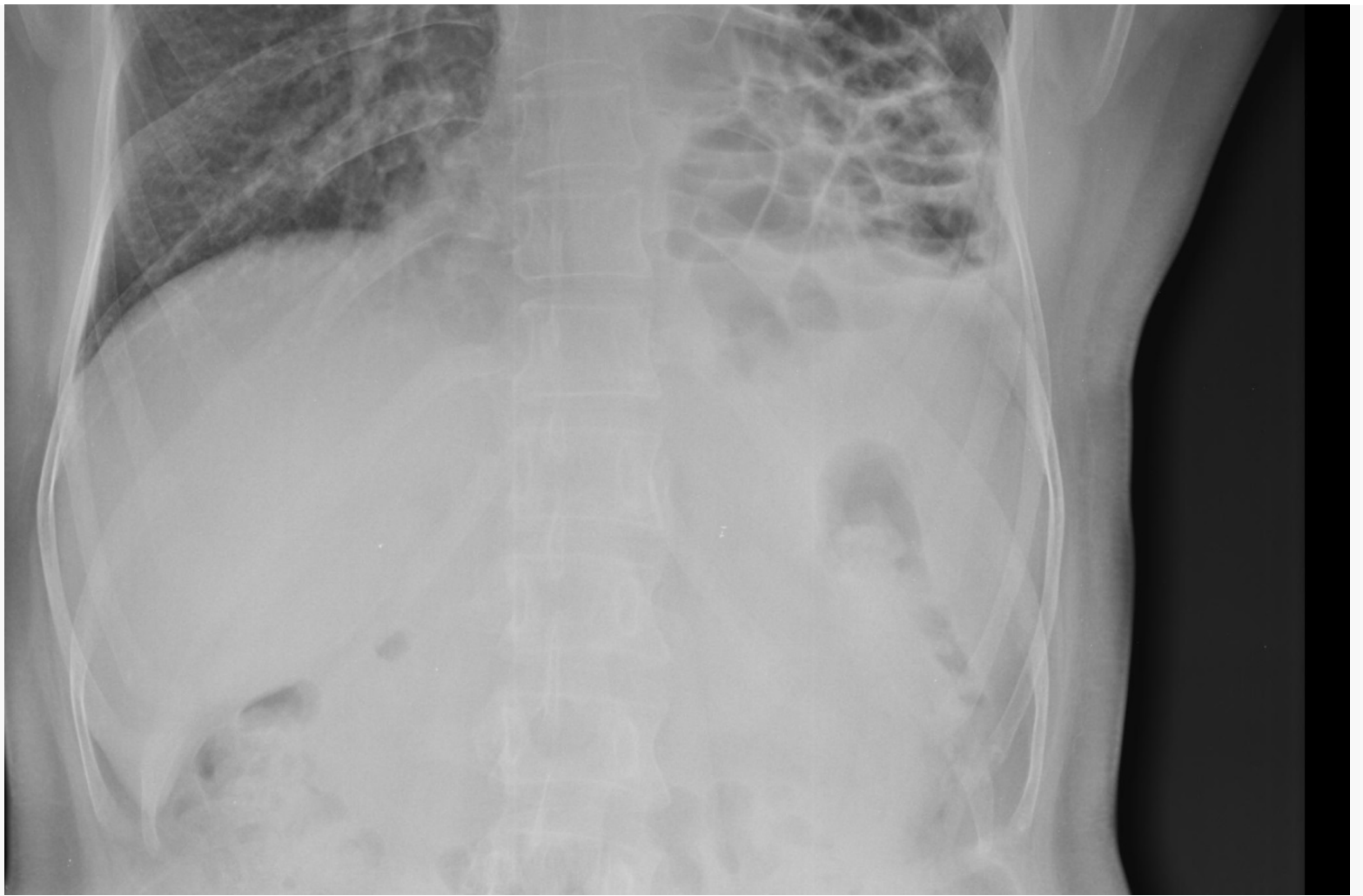
Overall score: **0%**

1 -

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[Back to top](#)





□ Question 94 of 200

A 46-year-old man presents with a persistent cough, yellow-green sputum. He feels more short-of-breath and has lost weight and has not coughed up blood.

He has a 25-pack-year history of smoking although he has quit 10 years ago.

On examination his respiratory rate is 18/min, heart rate is 96/min, blood pressure is 120/80 mmHg. His oxygen saturations on room air are 96%. Scatter

A chest x-ray is requested:





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What is the most likely diagnosis?

	Pneumonia
	Sarcoidosis
	Chronic obstructive pulmonary disease
	Bronchiectasis
	Pulmonary fibrosis

Dashboard

Overall score: **0%**

1 -

□ Question 95 of 200

□ □

A 17-year-old man is referred by the emergency department with weakness of his lower limbs and hands, worsening over the last 2 days. He is having increasing difficulty walking and is becoming very clumsy and dropping things. He burnt his hand yesterday in the kitchen without realising until afterwards that he had done it. He also complains of feeling dizzy on standing but has no chest pain or palpitations. He is normally fit and well, although did suffer a bout of diarrhoea and vomiting 4 weeks ago. He is on no regular medication and denies any alcohol or smoking history.

On examination he is afebrile, his blood pressure is 128/79 mmHg on lying but on standing it drops to 90/60 mmHg. His respiratory rate is 20/min and his saturations are 97% on air. His cardiovascular, respiratory and abdominal examinations are normal. Neurological examination reveals symmetrical distal weakness of his lower limbs with relative proximal sparing and altered sensation to fine touch, vibration and proprioception. He has similar findings in his upper limbs. He is suspected of having Guillain-Barre syndrome and following blood tests, CT head and lumbar puncture is started on IV immunoglobulins. Despite this, he begins to become increasingly short of breath and he is referred to ITU for respiratory support.

What respiratory parameter is used to determine if invasive ventilator support is needed?

	pO ₂ on ABG < 8kPa
	FEV ₁ :FVC ratio < 0.7
	Saturations on 15 litres O ₂ less than 93%
	FVC < 15ml/kg
	Peak flow of less than 300ml

Dashboard

Overall score: 0%

1 -

□ Question 95 of 200

□ □

A 17-year-old man is referred by the emergency department with weakness of his lower limbs and hands, worsening over the last 2 days. He is having increasing difficulty walking and is becoming very clumsy and dropping things. He burnt his hand yesterday in the kitchen without realising until afterwards that he had done it. He also complains of feeling dizzy on standing but has no chest pain or palpitations. He is normally fit and well, although did suffer a bout of diarrhoea and vomiting 4 weeks ago. He is on no regular medication and denies any alcohol or smoking history.

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	FEV ₁ :FVC ratio < 0.7
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	FVC < 15ml/kg
	Peak flow of less than 300ml

Dashboard

Overall score: **0%****1** -

Question 96 of 200

□ □

A 63-year-old is reviewed following admission with an infective exacerbation of COPD. He originally presented with shortness of breath, tight-chestedness and feeling generally unwell. He was initially managed with medical treatment including IV piperacillin with tazobactam, IV hydrocortisone, IV fluids, nebulised salbutamol and nebulised ipratropium bromide but his hypercapnia and acidosis failed to improve. He was then initiated on non-invasive ventilation (NIV) starting with IPAP of 10 cm H₂O and EPAP of 4 cm H₂O. He has managed to have the IPAP increased to 14 cm H₂O but he is struggling to tolerate this as he is feeling increasingly anxious. He has only had NIV for three hours so far.

Arterial blood gas results:

	On admission	Current
pH	7.11	7.23
pCO ₂	14.7	12.1
pO ₂	8.4	10.7

What is the most appropriate method to help him settle him?

	Give him haloperidol
	Give him diazepam
	Increase IPAP
	Decrease IPAP
	Stop NIV

Overall score: **0%**

1 -

□ Question 96 of 200

□ □

A 63-year-old is reviewed following admission with an infective exacerbation of COPD. He originally presented with shortness of breath, tight-chestedness and feeling generally unwell. He was initially managed with medical treatment including IV piperacillin with tazobactam, IV hydrocortisone, IV fluids, nebulised salbutamol and nebulised ipratropium bromide but his hypercapnia and acidosis failed to improve. He was then initiated on non-invasive ventilation (NIV) starting with IPAP of 10 cm H₂O and EPAP of 4 cm H₂O. He has managed to have the IPAP increased to 14 cm H₂O but he is struggling to tolerate this as he is feeling increasingly anxious. He has only had NIV for three hours so far.

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	Give him haloperidol
	Give him diazepam
	Increase IPAP
	Decrease IPAP
	Stop NIV

Overall score: **0%**

1 -

Question 97 of 200

□ □

An 84-year-old gentleman with known metastatic lung cancer comes to the oncology clinic for review. He was treated with multiple courses of radiotherapy but with lack of response the treatment has stopped and he is being managed symptomatically. He has noticed that his face looks different and whilst not concerning him, his daughter wanted him to mention it.

On examination, he has drooping of the right eyelid and the right pupil is smaller. What other feature would be consistent with Horner's syndrome?

	Wasting of the small muscles of the hand
	Ipsilateral loss of sweating of the face
	Supraclavicular mass
	Inability to abduct the ipsilateral shoulder
	Shoulder pain

Dashboard

Overall score: 0%

1 -

□ Question 97 of 200

□ □

An 84-year-old gentleman with known metastatic lung cancer comes to the oncology clinic for review. He was treated with multiple courses of radiotherapy but with lack of response the treatment has stopped and he is being managed symptomatically. He has noticed that his face looks different and whilst not concerning him, his daughter wanted him to mention it.

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	Wasting of the small muscles of the hand
	Ipsilateral loss of sweating of the face
	Supraclavicular mass
	Inability to abduct the ipsilateral shoulder
	Shoulder pain

Dashboard

Overall score: **0%****1** -

Question 98 of 200



A 24-year-old woman is admitted to Accident and Emergency with acute shortness of breath. She is unable to detail a clinical history due to shortness of breath. Her medication includes;

Cetirizine 10mg Orally Once Daily
Clobetasone butyrate (Eumovate) Topical

Her initial examination revealed bilateral widespread polyphonic wheezes. Her pulse rate was 102 beats per minute and blood pressure 128/75 mmHg. Her respiration rate was 33. Her oxygen saturations were 96% on 4L/min via face mask. She had a dry flaking rash in her elbow flexures with signs of excoriation.

The following blood tests were obtained;

Hb	11.2 g/dl
Platelets	$204 \times 10^9/l$
WBC	$10.3 \times 10^9/l$
Eosinophil	$0.56 \times 10^9/l$
CRP	65
Na+	135 mmol/l
K+	4.4 mmol/l
Urea	7.6 mmol/l
Creatinine	101 μ mol/l

Chest x-ray was clear. A peak expiratory flow was 200 L/min(expected 402).

Initial arterial blood gas on 4L/min oxygen via face mask;

pH	7.46

pCO2	3.5 kPa
pO2	14 kPa
HCO3	19 mmol/l
Lactate	1.8 mmol/l

She is treated with nebulised salbutamol and ipratropium bromide and oral prednisolone 40mg and oxygen 4L/min.

You re-review the patient 30 minutes later on the Admissions Unit. Her examination reveals symmetrical quiet breath sounds and quiet bilateral wheezes. She has symmetrical chest wall movement. Her pulse rate is 80 beats per minute. Blood pressure 103/68 mmHg. Her respiratory was 18 with oxygen saturations 94% on 6L/min via face mask. Peak expiratory flow was 120 L/min.

Repeat arterial blood gas on 6L/min oxygen via face mask;

pH	7.33
pCO2	6.2kPa
pO2	13kPa
HCO3	20 mmol/l
Lactate	2.2 mmol/l

What is the most appropriate treatment?

<input type="checkbox"/>	Intravenous Magnesium
<input type="checkbox"/>	Reduce oxygen levels
<input type="checkbox"/>	Intravenous Salbutamol
<input type="checkbox"/>	Referral to intensive care
<input type="checkbox"/>	Biphasic positive airway pressure

Dashboard

Overall score: **0%**

1 -

Question 98 of 200

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pCO2	6.2kPa
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HCO3	20 mmol/l
Lactate	2.2 mmol/l

What is the most appropriate treatment?

	Intravenous Magnesium
	Reduce oxygen levels
	Intravenous Salbutamol
	Referral to intensive care
	Biphasic positive airway pressure

Dashboard
Overall score: 0%
1 -

□ Question 99 of 200

□ □

A 35 year old chronic alcoholic male is admitted with severe epigastric pain. Laboratory investigations confirmed a significantly raised amylase. He is started on treatment for severe pancreatitis but his condition deteriorated over the next 2 days and he developed acute kidney injury with severe respiratory distress to an extent needing mechanical ventilation. Initial chest radiographs revealed widespread bilateral infiltrates. Which of the following therapies has been shown to most likely decrease overall mortality of ARDS?

	Immediate initiation of glucocorticoid therapy to limit inflammatory progression
	Placing patient in the prone position, allowing for greater recruitment of unaffected alveoli and improving PaO ₂ /FiO ₂ ratio
	Implementing a low tidal volume ventilation protocol
	Changing from O ₂ to Nitric oxide at 5 ppm and titrating up until pt has an acceptable PaO ₂ /FiO ₂ ratio
	Aggressive diuresis to reduce pulmonary edema and vascular congestion

Dashboard

Overall score: 0%

1 -

□ Question 99 of 200

□ □

A 35 year old chronic alcoholic male is admitted with severe epigastric pain. Laboratory investigations confirmed a significantly raised amylase. He is started on treatment for severe pancreatitis but his condition deteriorated over the next 2 days and he developed acute kidney injury with severe respiratory distress to an extent needing mechanical ventilation. Initial chest radiographs revealed widespread bilateral infiltrates. Which of the following therapies has been shown to most likely decrease overall mortality of ARDS?

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	Aggressive diuresis to reduce pulmonary edema and vascular congestion

Dashboard

Overall score: **0%****1** -

Question 100 of 200

A 50-year-old woman was referred to the clinic with a 6-month history of shortness of breath. She gave a history of progressive exertional breathlessness and now could only walk a couple of hundred meters. In addition she also noted swelling of her ankles that started 3 weeks ago and had experienced 1 episodes of loss of consciousness. She had been a wheezy child but had grown out of it. She was a non-smoker and drank approximately 5 units of alcohol per week. She took no regular medications and had no known allergies. Her General Practitioner had prescribed salbutamol and beclomethasone inhalers for her but this had made no difference.

On examination her heart rate was 86 beats per minute, blood pressure 135/90 mmHg, respiratory rate 20 breaths per minute and oxygen saturations were 93% on room air.

Initial investigations are shown below:

Full blood count, urea and electrolytes, liver function tests: normal
Autoantibody screen: negative

Chest x-ray: clear lung fields, no cardiomegaly

Lung function tests:
-forced expiratory volume in 1-second 2.8L (115% predicted)
-forced vital capacity 3.2L (120% predicted)
-total lung capacity 5.8L (120% predicted)
-carbon monoxide diffusion in the lungs 92%

Transthoracic echocardiogram:
-left ventricle: normal size, ejection fraction 65% (>55)
-normal aortic and pulmonary valves
-right ventricle dilated
-tricuspid regurgitation (mild)
-pulmonary artery systolic pressure: 55 mmHg

CT scan on chest: normal

Ventilation-perfusion (V/Q) scan: low probability for thromboembolic disease

What is the appropriate next investigation?

	Bronchoscopy and bronchoalveolar lavage
	Cardiac catheterisation
	CT guided lung biopsy
	CT pulmonary angiography
	Genetic testing for cystic fibrosis

Dashboard

Overall score: 0%

1 -

Question 100 of 200

□ □

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	Bronchoscopy and bronchoalveolar lavage
	Cardiac catheterisation
	CT guided lung biopsy
	CT pulmonary angiography
	Genetic testing for cystic fibrosis

Dashboard

Overall score: 0%

1 -

Question 101 of 200

□ □

A 30-year-old pregnant woman (24 weeks) is admitted to the acute medical unit with sudden onset shortness of breath and pleuritic chest pain. She has no past medical history other than eczema and this is her first pregnancy.

On examination, auscultation of her chest reveals only a mild wheeze with oxygen saturations of 94% on room air and a respiratory rate of 25/min. Her heart sounds are normal, with a heart rate of 97bpm and blood pressure is 105/60 mmHg. An ECG shows sinus rhythm.

The FY1 doctor on the ward has requested a D-dimer to try and 'speed up the diagnosis', which comes back positive.

What is the next appropriate investigation?

	Ventilation-Perfusion (V/Q) scan
	Chest x-ray
	Peak flow measurement
	CT Pulmonary Angiogram (CTPA)
	Ultrasound doppler of the lower legs

Dashboard

Overall score: 0%

1 -

Question 101 of 200

□ □

A 30-year-old pregnant woman (24 weeks) is admitted to the acute medical unit with sudden onset shortness of breath and pleuritic chest pain. She has no past medical history other than eczema and this is her first pregnancy.

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	Ventilation-Perfusion (V/Q) scan
	Chest x-ray
	Peak flow measurement
	CT Pulmonary Angiogram (CTPA)
	Ultrasound doppler of the lower legs

Dashboard

Overall score: **0%**

1 -

Question 102 of 200

□ □

A 20-year-old woman presents to her general practitioner with persistent episodic shortness of breath and a dry cough. She is currently being treated by her GP for asthma and takes 2 puffs of Seretide 25/100 (salmeterol and fluticasone) twice a day using a metered dose inhaler with a spacer, which control her symptoms for the majority of the day - however she still gets wheezy and short of breath upon running or cycling. Her only other past medical history of note includes allergic rhinitis for which she takes loratadine and has been on a number of different nasal sprays for.

Examination of the chest was normal and peak expiratory flow readings were 78% predicted.

What is the most appropriate next step in this case?

	Add in oral theophylline
	Add in an oral leukotriene antagonist
	Increase the long-acting beta antagonist
	Add in a long-acting muscarinic antagonist
	Add in an oral steroid

Dashboard

Overall score: 0%

1 -

Question 102 of 200

□ □

A 20-year-old woman presents to her general practitioner with persistent episodic shortness of breath and a dry cough. She is currently being treated by her GP for asthma and takes 2 puffs of Seretide 25/100 (salmeterol and fluticasone) twice a day using a metered dose inhaler with a spacer, which control her symptoms for the majority of the day - however she still gets wheezy and short of breath upon running or cycling. Her only other past medical history of note includes allergic rhinitis for which she takes loratadine and has been on a number of different nasal sprays for.

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	Increase the long-acting beta antagonist
	Add in a long-acting muscarinic antagonist
	Add in an oral steroid

Dashboard

Overall score: **0%**

1 -

Question 103 of 200

□ □

A 72 year-old woman has been referred to the chest clinic by her General Practitioner (GP). The patient describes a 3-year history of cough and progressive shortness of breath. Over the past 3 years the GP had prescribed numerous courses of antibiotics and steroids but these had had little benefit. She was a non-smoker, did not drink alcohol and was on no regular medications. The cough was productive of purulent sputum with occasional streaks of blood. There was no history of weight loss or fever, but the patient did note lethargy. The rest of her family were well and the only medical history of note was an episode of pneumonia as a child.

Respiratory examination revealed bilateral crackles but no other added sounds. You note that the patient was not clubbed.

A chest x-ray, organised by the GP, shows minor bilateral atelectasis and opacities.

What is the most appropriate diagnostic test?

	Bronchoscopy
	Genetic testing for Primary Ciliary Dyskinesia
	High resolution CT scan of chest
	Serum α 1-antitrypsin level
	Tuberculin skin test

Dashboard

Overall score: 0%

1 -

Question 103 of 200

□ □

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	Bronchoscopy
	Genetic testing for Primary Ciliary Dyskinesia
	High resolution CT scan of chest
	Serum α 1-antitrypsin level
	Tuberculin skin test

Dashboard

Overall score: **0%**

1 -

Question 104 of 200

A 28 year old woman is admitted to the medical assessment unit complaining of pleuritic chest pain. She is 32 weeks pregnant into her first pregnancy. An ECG reveals a sinus tachycardia. Her blood tests are unremarkable, although the referring accident and emergency doctor added on a D-dimer test for completion and this has come back positive. According to the Royal College of Obstetricians and Gynaecologists guidelines, what is the next suitable investigation for this patient?

<input type="checkbox"/>	Chest x-ray
<input type="checkbox"/>	Ventilation/perfusion scan
<input type="checkbox"/>	Compression duplex doppler of the legs
<input type="checkbox"/>	CT pulmonary angiogram (CTPA)
<input type="checkbox"/>	Cardiac catheterisation to assess right sided pressures

Dashboard

Overall score: **0%**

1 -

Question 104 of 200

A 28 year old woman is admitted to the medical assessment unit complaining of pleuritic chest pain. She is 32 weeks pregnant into her first pregnancy. An ECG reveals a sinus tachycardia. Her blood tests are unremarkable, although the referring accident and emergency doctor added on a D-dimer test for completion and this has come back positive. According to the Royal College of Obstetricians and Gynaecologists guidelines, what is the next suitable investigation for this patient?

	Chest x-ray
	Ventilation/perfusion scan
	Compression duplex doppler of the legs
	CT pulmonary angiogram (CTPA)
	Cardiac catheterisation to assess right sided pressures

Dashboard

Overall score: **0%**

1 -

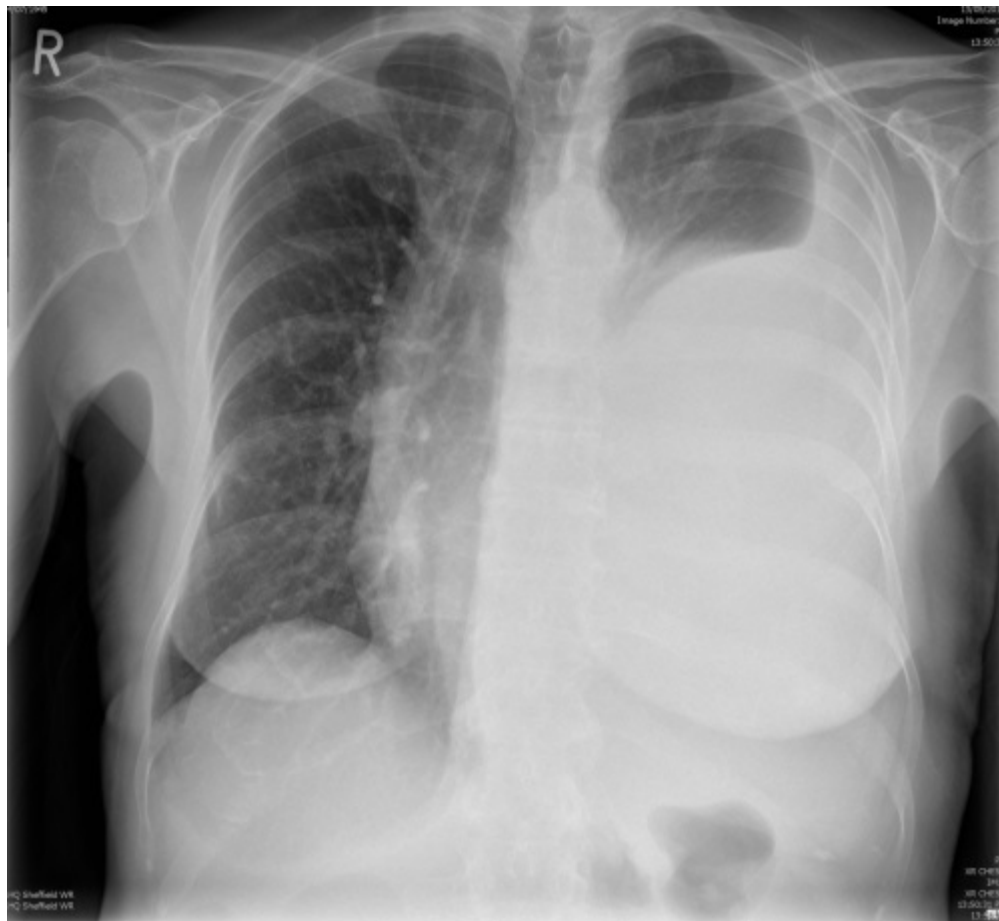
Question 105 of 200

□ □

A 52-year-old woman is referred to the Acute Medical Unit after developing progressive dyspnoea over the past 4 weeks. She has no significant past medical history of note.

On examination her respiratory rate is 18/min, pulse 84/min, blood pressure 102/64 mmHg and oxygen saturations 96% on room air. Temperature is 37.1°C.

A chest x-ray is performed:





What is the most appropriate initial management?

	Insert a 26F chest drain after performing a thoracostomy
	Arrange a high resolution CT chest
	Prescribe intravenous antibiotics
	Insert a 18F chest drain using the Seldinger technique
	Pleural aspiration

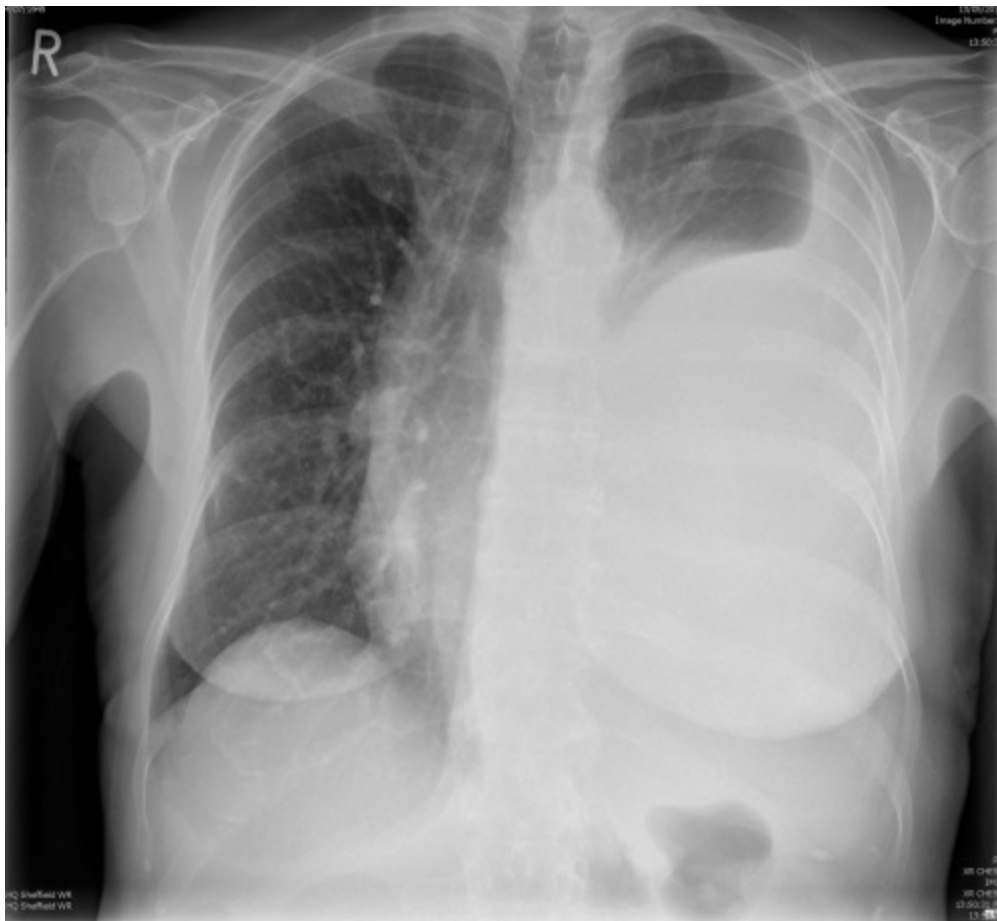
Dashboard

Overall score: **0%**

1 -

11

A chest x-ray is performed:



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What is the most appropriate initial management?

	Insert a 26F chest drain after performing a thoracostomy
	Arrange a high resolution CT chest
	Prescribe intravenous antibiotics
	Insert a 18F chest drain using the Seldinger technique
	Pleural aspiration

Dashboard

Overall score: **0%**

1 -

□ Question 106 of 200

□ □

A 46-year-old woman presents with a 4 week history of cough. This is non-productive and not associated with dyspnoea or chest pain. The symptoms were preceded by a 'head cold'. Her past medical history includes asthma as a child and smoking. Respiratory examination reveals a clear chest with no added sounds. Oxygen saturations are 98% on room air. Temperature is 36.7°C and heart rate 72/min.

A chest x-ray is requested as she is a smoker:



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What is the most likely explanation for the changes on the x-ray?

	Healed varicella pneumonia
	Idiopathic pulmonary fibrosis
	Cryptogenic organizing pneumonia
	Tuberculosis
	Sarcoidosis

Dashboard

Overall score: 0%

1 -

□ Question 106 of 200

□ □

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	Healed varicella pneumonia
	Idiopathic pulmonary fibrosis
	Cryptogenic organizing pneumonia
	Tuberculosis
	Sarcoidosis

Dashboard

Overall score: **0%**
1 -

□ Question 106 of 200

□ □

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	Healed varicella pneumonia
	Idiopathic pulmonary fibrosis
	Cryptogenic organizing pneumonia
	Tuberculosis
	Sarcoidosis

Dashboard

Overall score: **0%**

1 -

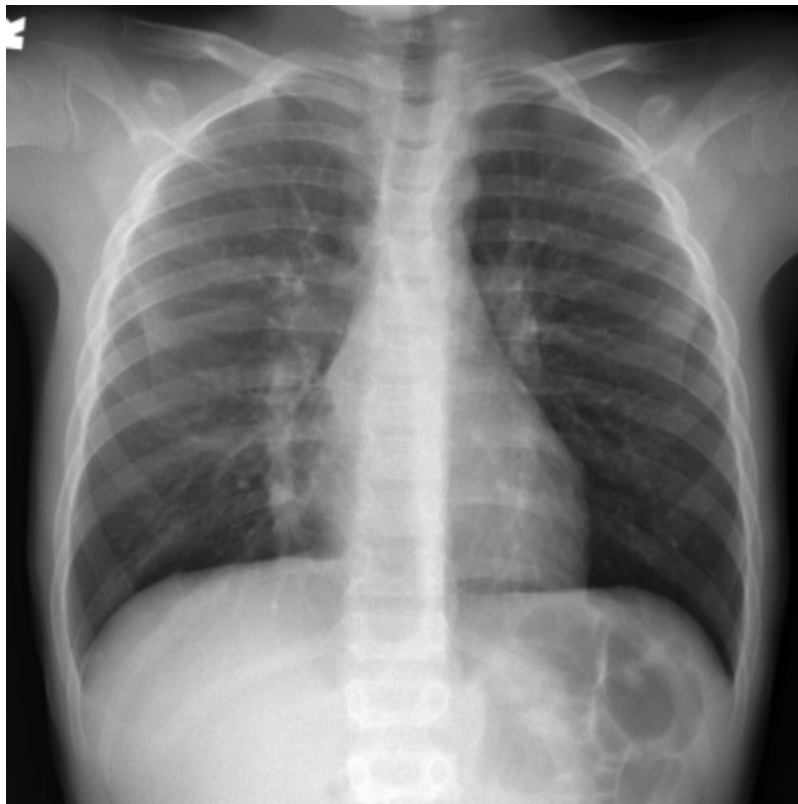
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Question 107 of 200

□ □

A 9-year-old is referred to the Children's Ward with pyrexia and cough:



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What does the x-ray show?

<input type="checkbox"/>	Right middle lobe consolidation
<input type="checkbox"/>	Perihilar lymphadenopathy
<input type="checkbox"/>	No abnormality

	Left lingual consolidation
	Right upper lobe consolidation

Dashboard

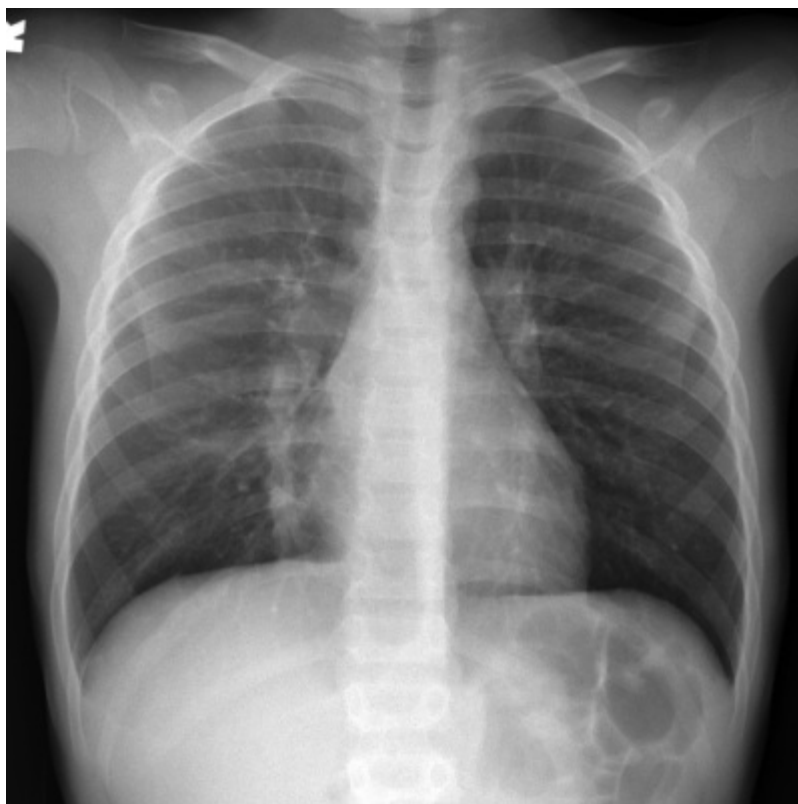
Overall score: 0%

1 -

□ Question 107 of 200

□ □

A 9-year-old is referred to the Children's Ward with pyrexia and cough:



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What does the x-ray show?

	Right middle lobe consolidation
	Perihilar lymphadenopathy
	No abnormality

	Left lingual consolidation
	Right upper lobe consolidation

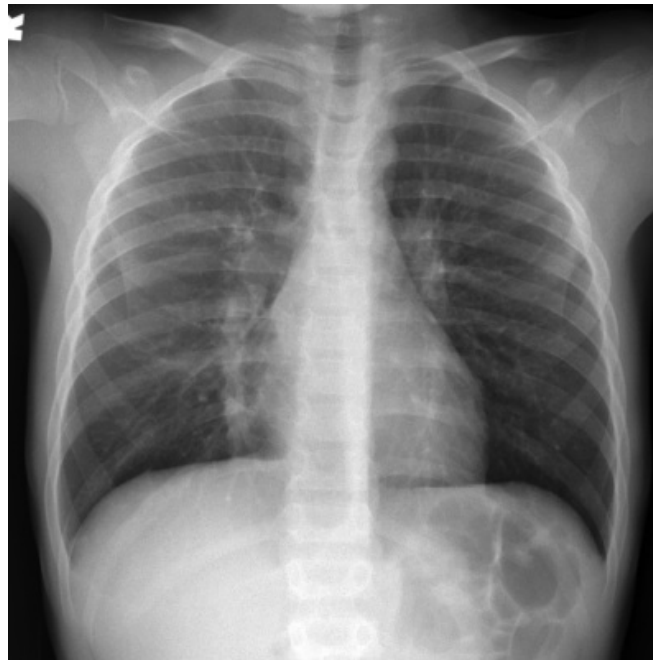
Dashboard

Overall score: **0%**
1 -

Question 107 of 200

□ □

A 9-year-old is referred to the Children's Ward with pyrexia and cough:



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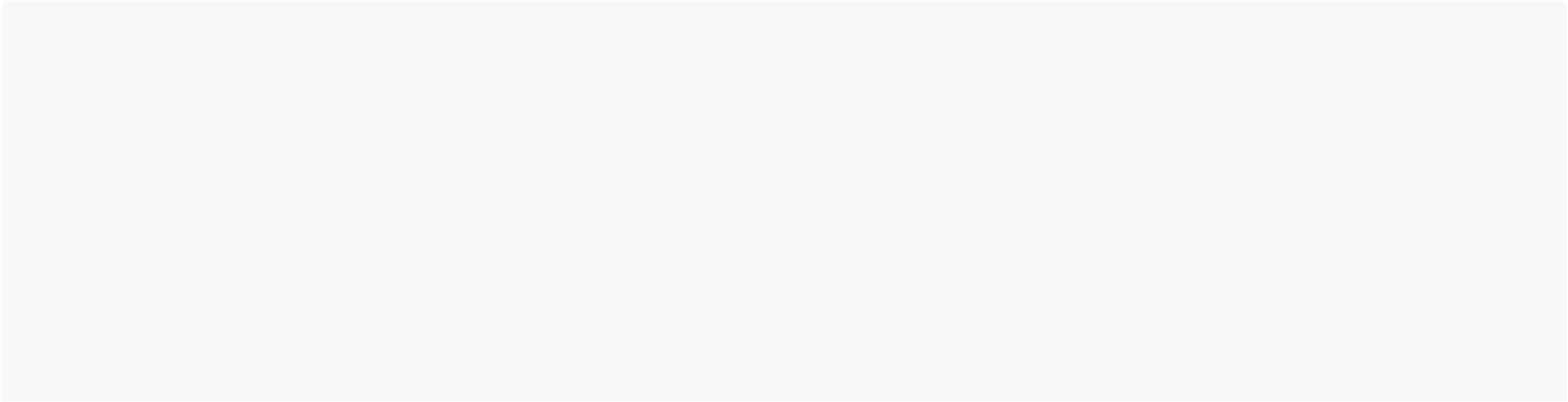
What does the x-ray show?

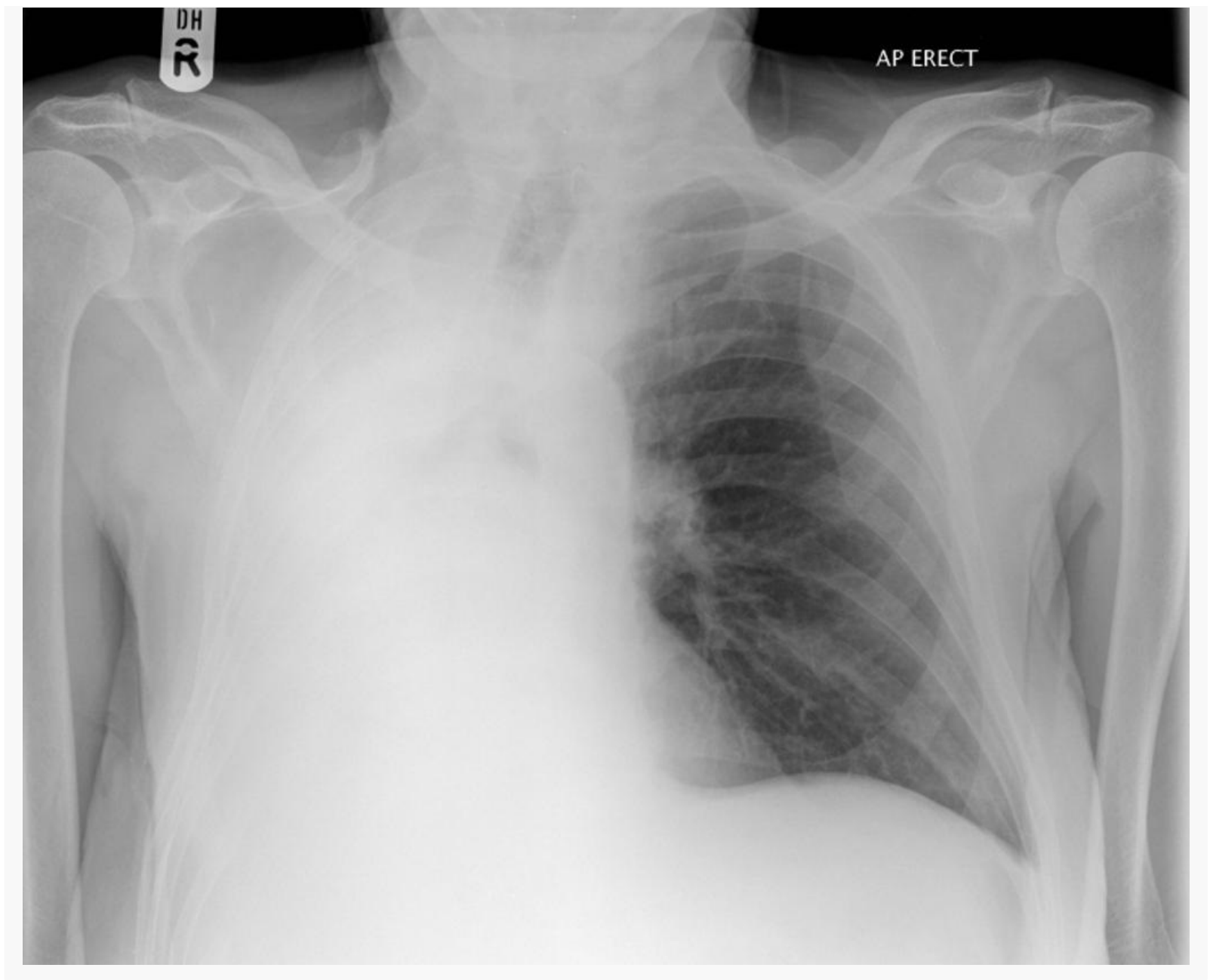
	Right middle lobe consolidation
	Perihilar lymphadenopathy

	No abnormality
	Left lingual consolidation
	Right upper lobe consolidation

Dashboard

Overall score: **0%**
1 -

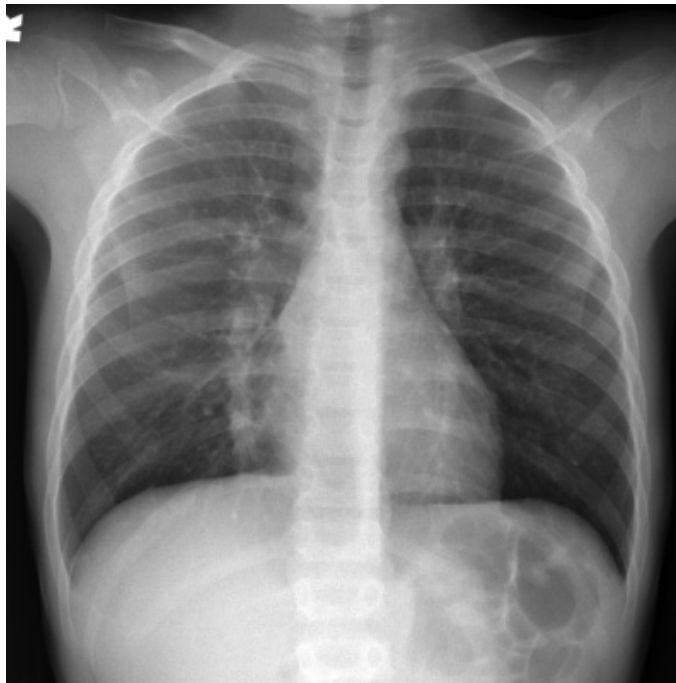




□ Question 107 of 200

□ □

A 9-year-old is referred to the Children's Ward with pyrexia and cough:



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What does the x-ray show?

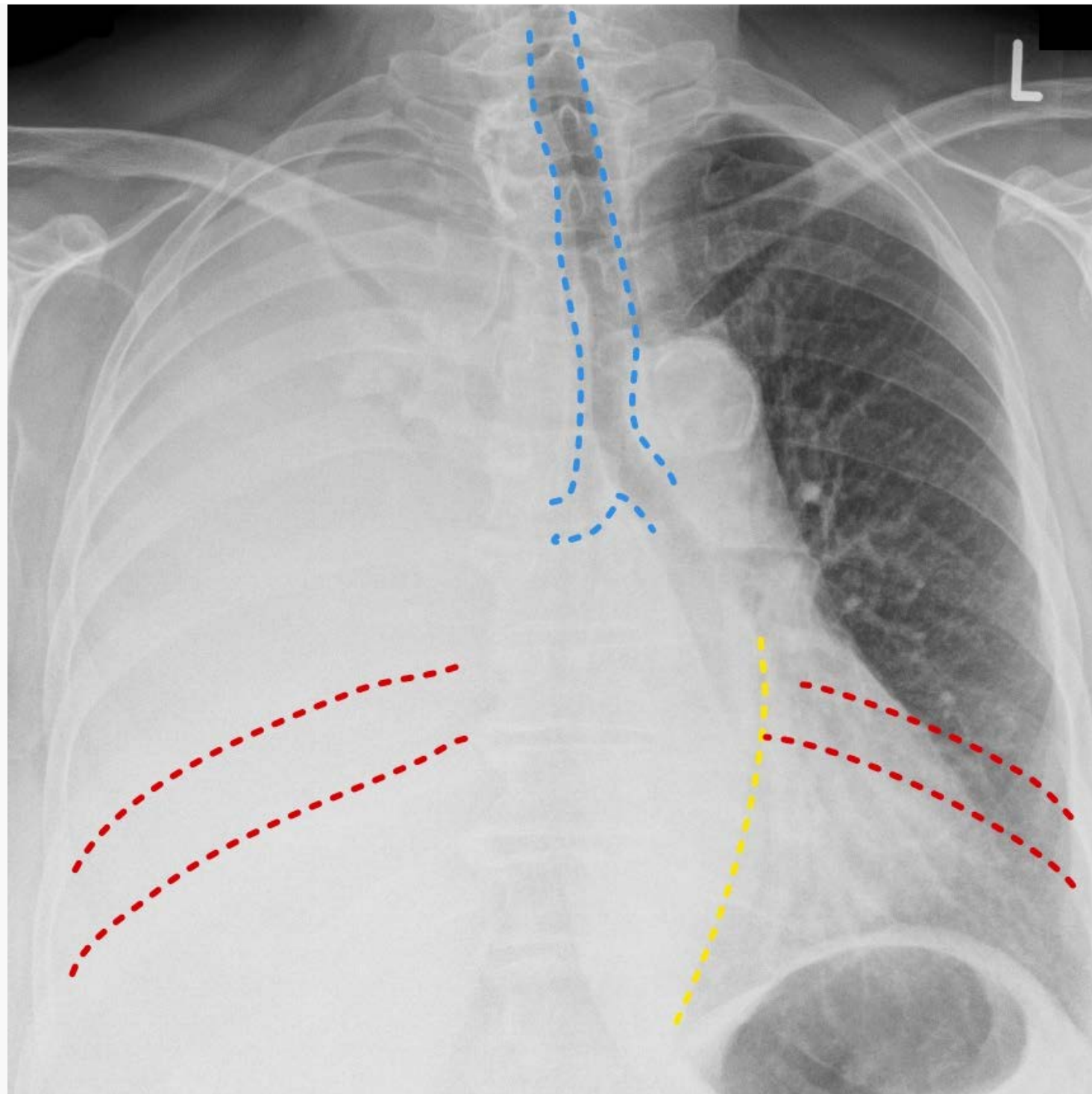
	Right middle lobe consolidation
	Perihilar lymphadenopathy

	No abnormality
	Left lingual consolidation
	Right upper lobe consolidation

Dashboard

Overall score: **0%**

1 -



Question 108 of 200

□ □

A 68-year-old woman is admitted to the Emergency Department with shortness of breath. A chest x-ray is taken as part of the initial investigations.



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Based on the chest x-ray, what is the most likely diagnosis?

	Multiple pulmonary emboli
	Tuberculosis

	Multiple lung abscesses
	Bronchiectasis
	Lung metastases

Dashboard

Overall score: **0%**
1 -

Question 108 of 200

□ □

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© Image used on license from Radiopaedia



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Dashboard

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1 -

Question 108 of 200

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© Image used on license from Radiopaedia

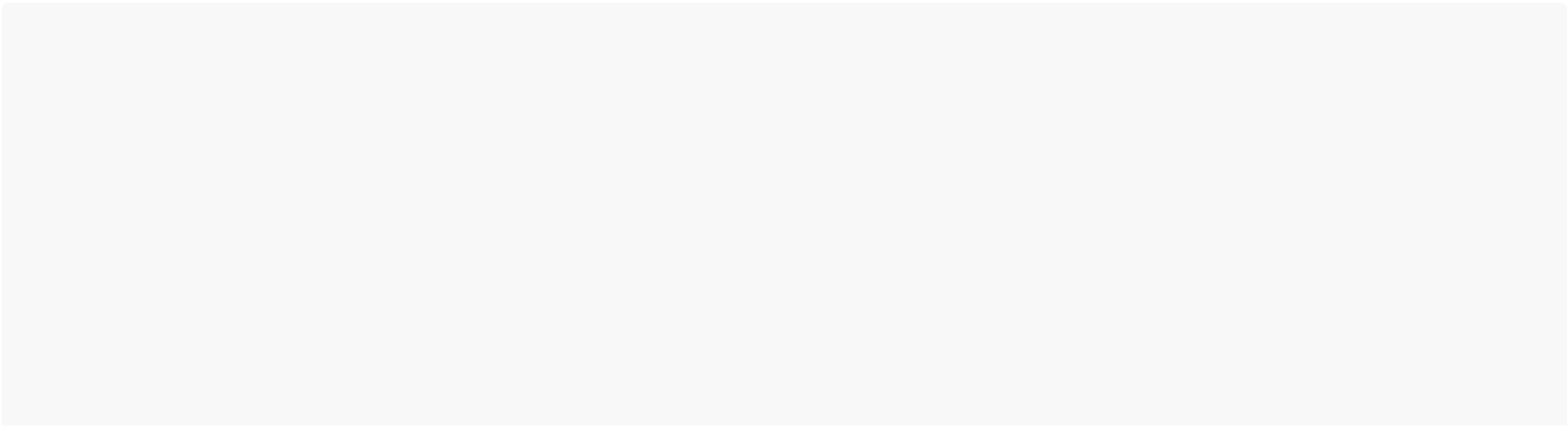
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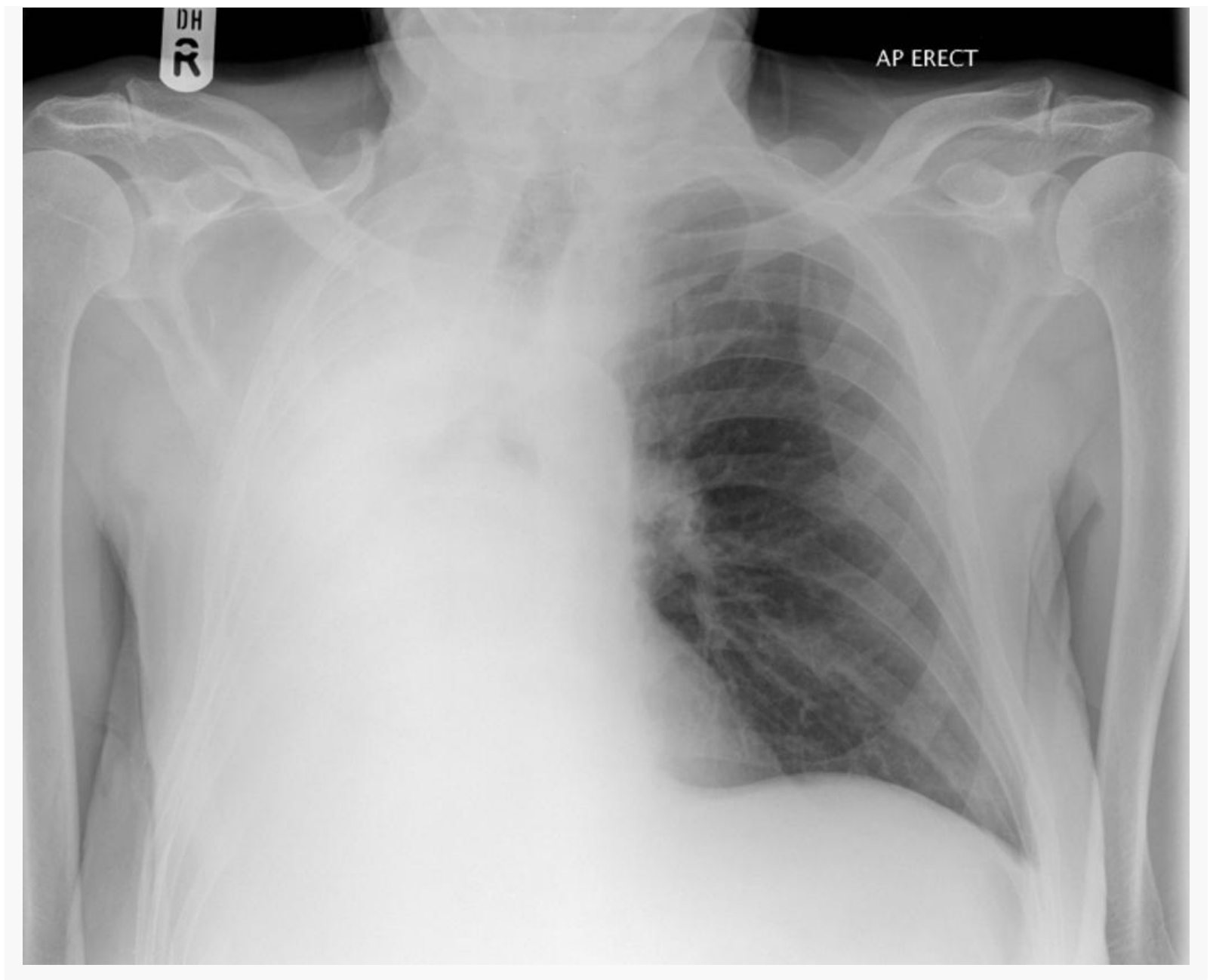
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	Bronchiectasis
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Dashboard

Overall score: **0%**
1 -





□ Question 108 of 200

□ □

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© Image used on license from Radiopaedia

Based on the chest x-ray, what is the most likely diagnosis?

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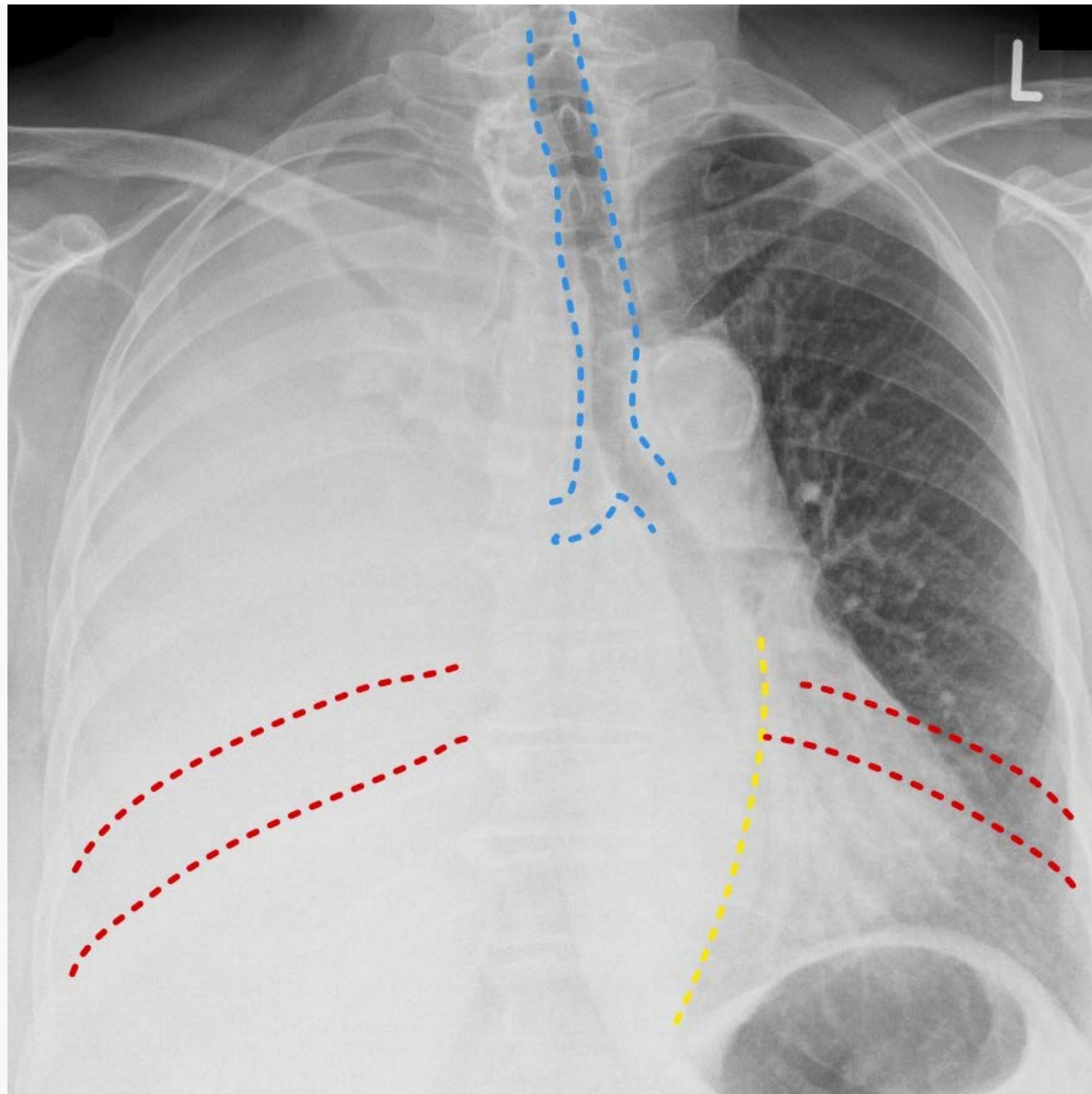
Tuberculosis

	Multiple lung abscesses
	Bronchiectasis
	Lung metastases

Dashboard

Overall score: **0%**

1 -



Question 109 of 200

A 35-year-old man presents with a chronic productive cough which has been affecting him for several years. He has no other past medical history apart from recurrent otitis media as a child. He takes no regular medications. He has never smoked and has no history of passive smoking and works as a solicitor. He has no pets at home and has no mould that he is aware of. On examination there is finger clubbing, he appears underweight, there are coarse late-inspiratory crepitations and a mild wheeze. Also, his heart sounds are louder on the right side, and his apex beat is also only present on the right. What further investigation would most likely confirm the diagnosis?

	Immunological testing for <i>Aspergillus fumigatus</i> specific IgE
	CFTR gene testing
	Sputum MCS
	Sputum Zeil-Neilsen staining and microscopy.
	Ciliary function tests

Dashboard

Overall score: 0%

1 -

Question 109 of 200

□ □

A 35-year-old man presents with a chronic productive cough which has been affecting him for several years. He has no other past medical history apart from recurrent otitis media as a child. He takes no regular medications. He has never smoked and has no history of passive smoking and works as a solicitor. He has no pets at home and has no mould that he is aware of. On examination there is finger clubbing, he appears underweight, there are coarse late-inspiratory crepitations and a mild wheeze. Also, his heart sounds are louder on the right side, and his apex beat is also only present on the right. What further investigation would most likely confirm the diagnosis?

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1 -

Question 109 of 200

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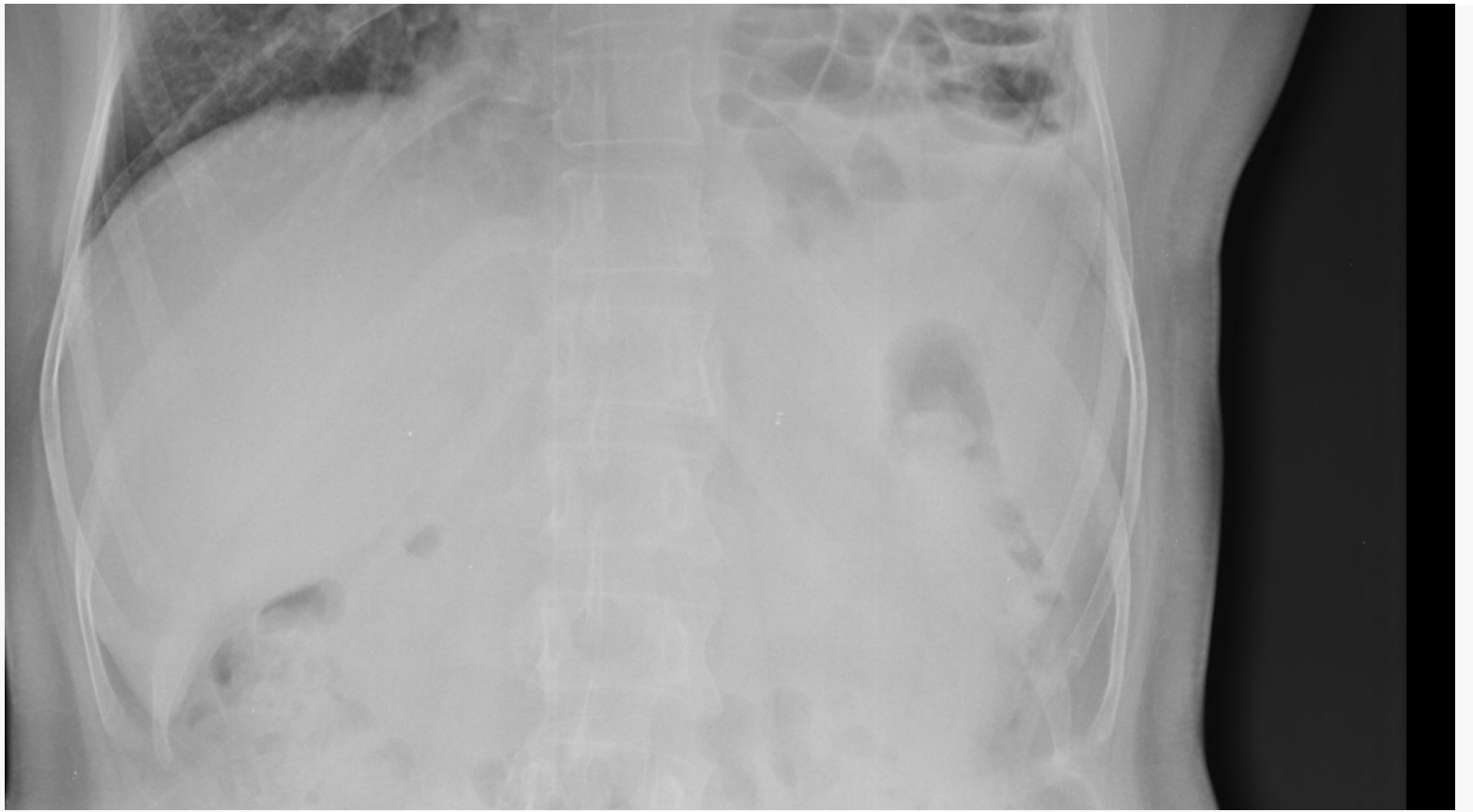
	Immunological testing for Aspergillus fumigatus specific IgE
	CFTR gene testing
	Sputum MCS
	Sputum Zeil-Neilsen staining and microscopy.
	Ciliary function tests

Dashboard

Overall score: 0%

1 -





Question 109 of 200

A 35-year-old man presents with a chronic productive cough. He has no other past medical history apart from recurrent otitis media. He has never smoked and has no history of passive smoking and is not aware of any occupational exposures. On examination there is finger clubbing, hyperinflation, crepitations and a mild wheeze. Also, his heart sounds are normal. What further investigation would you recommend?



Immunological testing for *Aspergillus fumigatus*

CFTR gene testing

Sputum MCS

Sputum Zeil-Neilsen staining and microscopy.

Ciliary function tests

Dashboard

Overall score: 0%

1 -

Question 110 of 200

A 23-year-old female student presents to the emergency department with a headache which has developed since starting her third year at university studying economics. She has also been noticing nausea and breathlessness. She had spent the summer travelling to Argentina and teaching English, after which she returned to the UK and moved into shared student accommodation in preparation for her next term. She had been well during her travels except for four days of diarrhoea shortly after she arrived. She has a past medical history of chlamydia which was treated by a local GUM clinic. She does not smoke and has minimal alcohol intake. On examination, she appears tired but otherwise well. Auscultation of her chest is normal. A urinary pregnancy test is positive.

Blood tests:

Hb	127 g/l
Platelets	336 * 10 ⁹ /l
WBC	9.4 * 10 ⁹ /l
Na ⁺	137 mmol/l
K ⁺	4.2 mmol/l
Urea	3.7 mmol/l
Creatinine	63 µmol/l

Arterial blood gas:

pH	7.41 g/l
pCO ₂	3.6 mmHg
pO ₂	9.4 mmHg
Na ⁺	137 mmol/l
FCOHb	22%

She is started on 15L of oxygen via a non-rebreather mask. How should she be further managed?

	Wean off oxygen guided by standard pulse oximetry saturation levels
	Add IV mannitol
	Maintain high-flow oxygen until asymptomatic or carbon monoxide levels are <10%
	Refer urgently for hyperbaric oxygen treatment
	Arrange urgently for non-invasive ventilation

Dashboard

Overall score: 0%

1 -

□ Question 110 of 200

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	Refer urgently for hyperbaric oxygen treatment
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Dashboard

Overall score: **0%**

1 -

Question 111 of 200

□ □

A 50-year-old man presents with non-productive cough and breathlessness on exertion. He is feverish and has lost 6kg in 2 months. He has mild asthma but doesn't require medication. He is a non smoker.

Chest X-ray: peripheral lung infiltrates.

Hb	13.4 g/dl
Platelets	170 * 10 ⁹ /l
WBC	11.4 * 10 ⁹ /l (40% polymorphs, 16% lymphocytes)
CRP	13 mg/L
ESR	35 mm/h

What is the most likely diagnosis?

	Idiopathic pulmonary fibrosis
	Histiocytosis X
	Chronic eosinophilic pneumonia
	Lymphangioleiomyomatosis
	Löffler's syndrome

Dashboard

Overall score: 0%

1 -

Question 111 of 200

□ □

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	Histiocytosis X
	Chronic eosinophilic pneumonia
	Lymphangioleiomyomatosis
	Löffler's syndrome

Dashboard

Overall score: **0%**

1 -

□ Question 112 of 200



A 67-year-old man comes to the emergency department with a severe unremitting headache which he says has built up steadily over the past week. He has had a chronic cough for the past 6 months and continues to smoke 30 cigarettes per day. On examination his blood pressure is 182/90 mmHg, his pulse is 90 beats per minute and regular. He has plethoric facies and you note dilated veins across his head, neck and arms. There is bilateral wheeze on auscultation of the chest.

Investigations

Hb	113 g/l
Platelets	$341 \times 10^9/l$
WBC	$8.2 \times 10^9/l$

Na ⁺	142 mmol/l
K ⁺	4.4 mmol/l
Urea	6.7 mmol/l
Creatinine	121 μ mol/l
Calcium	2.92 mmol/l

Chest x-ray - Right hilar mass consistent with bronchial carcinoma

Which of the following therapies is most appropriate for relieving his symptoms?

	Chemotherapy
	Prednisolone
	Radiotherapy

	Surgical bypass
	Venous stenting

Dashboard

Overall score: **0%**
1 -

Question 112 of 200

□ □

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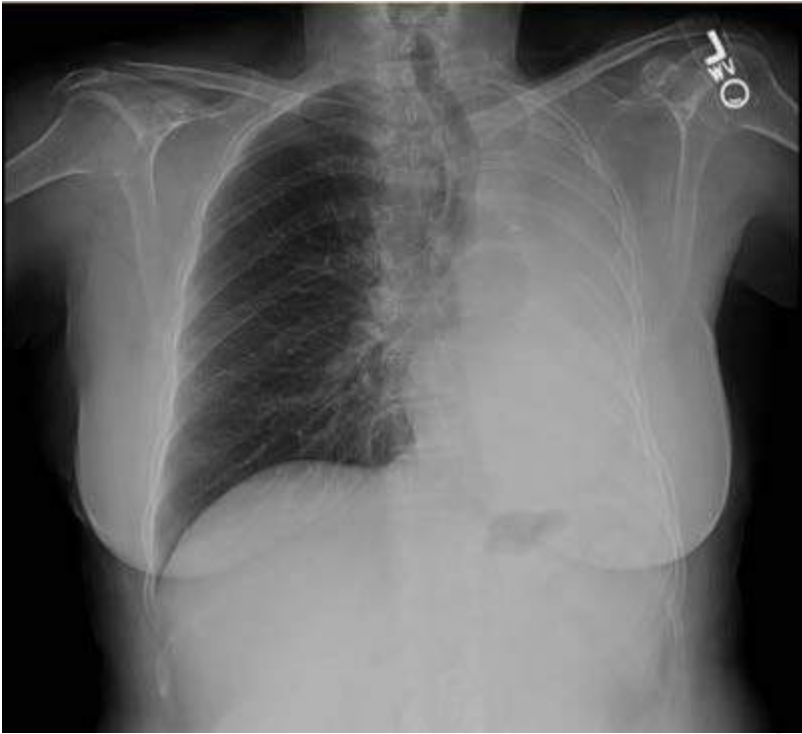
	Surgical bypass
	Venous stenting

Dashboard

Overall score: **0%**
1 -

Question 113 of 200

A 65-year-old woman is admitted to the Emergency Department after collapsing in a department store. A chest x-ray is done shortly after arriving in the department:



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What is the most likely explanation for the abnormality on the left side?

	Rotated film
	Massive pleural effusion
	Pneumonectomy

	Mesothelioma
	Pneumonia

Dashboard

Overall score: **0%**
1 -

Question 113 of 200

□ □

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Dashboard

Overall score: **0%**
1 -

Question 113 of 200

□ □

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© Image used on license from Radiopaedia



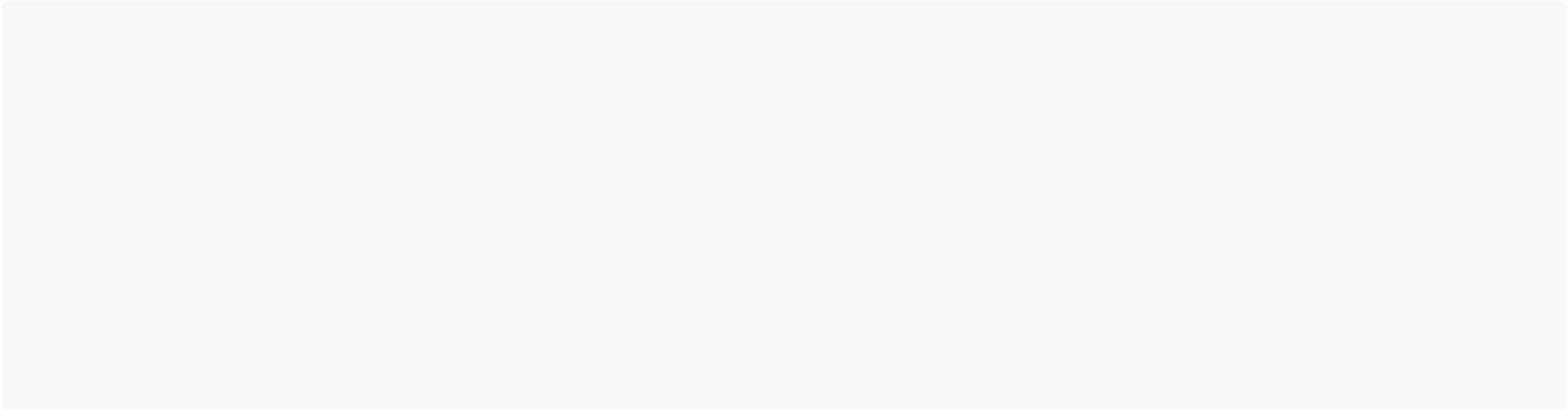
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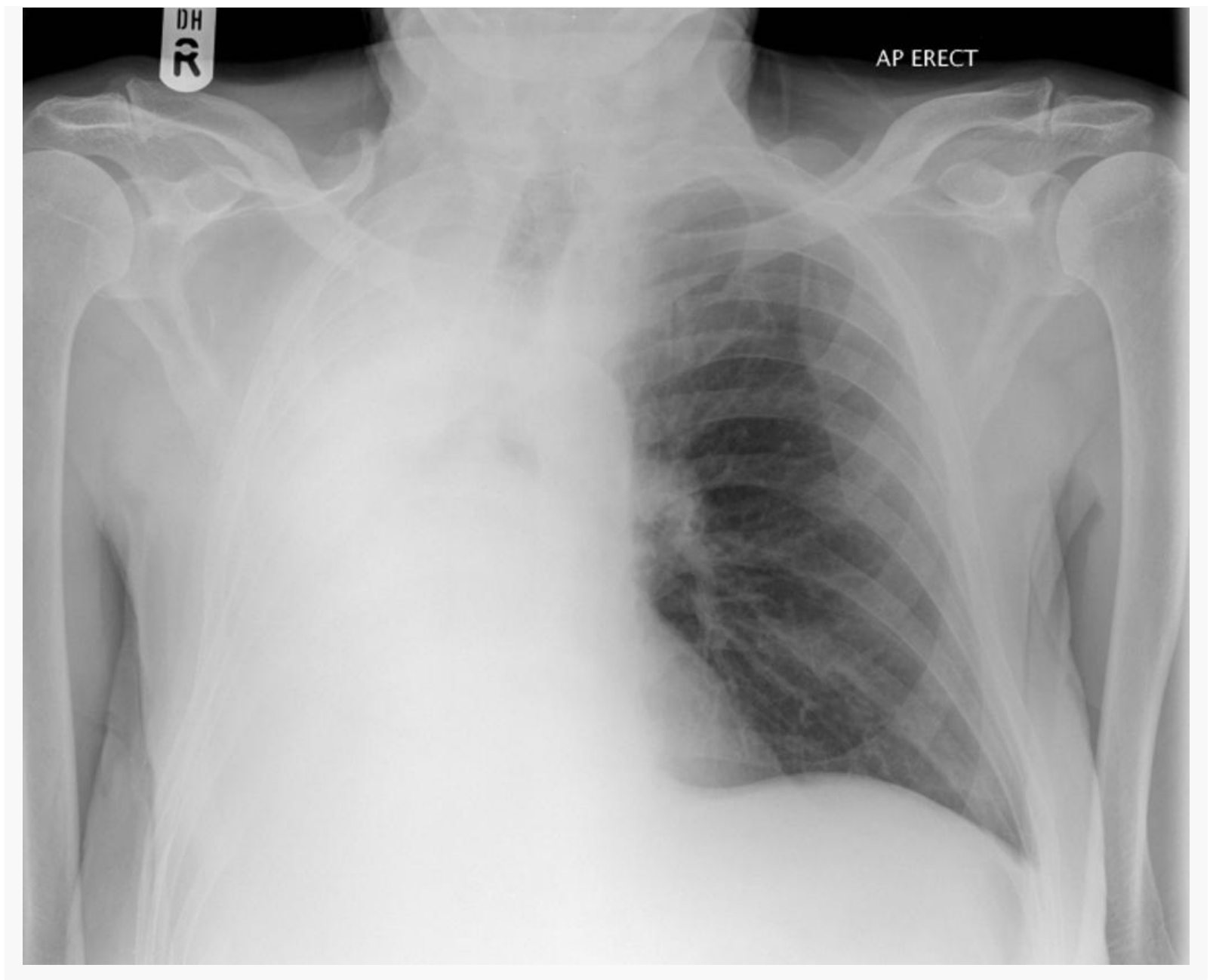
	Rotated film
	Massive pleural effusion
	Pneumonectomy

	Mesothelioma
	Pneumonia

Dashboard

Overall score: **0%**
1 -





□ Question 113 of 200

□ □

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© Image used on license from Radiopaedia



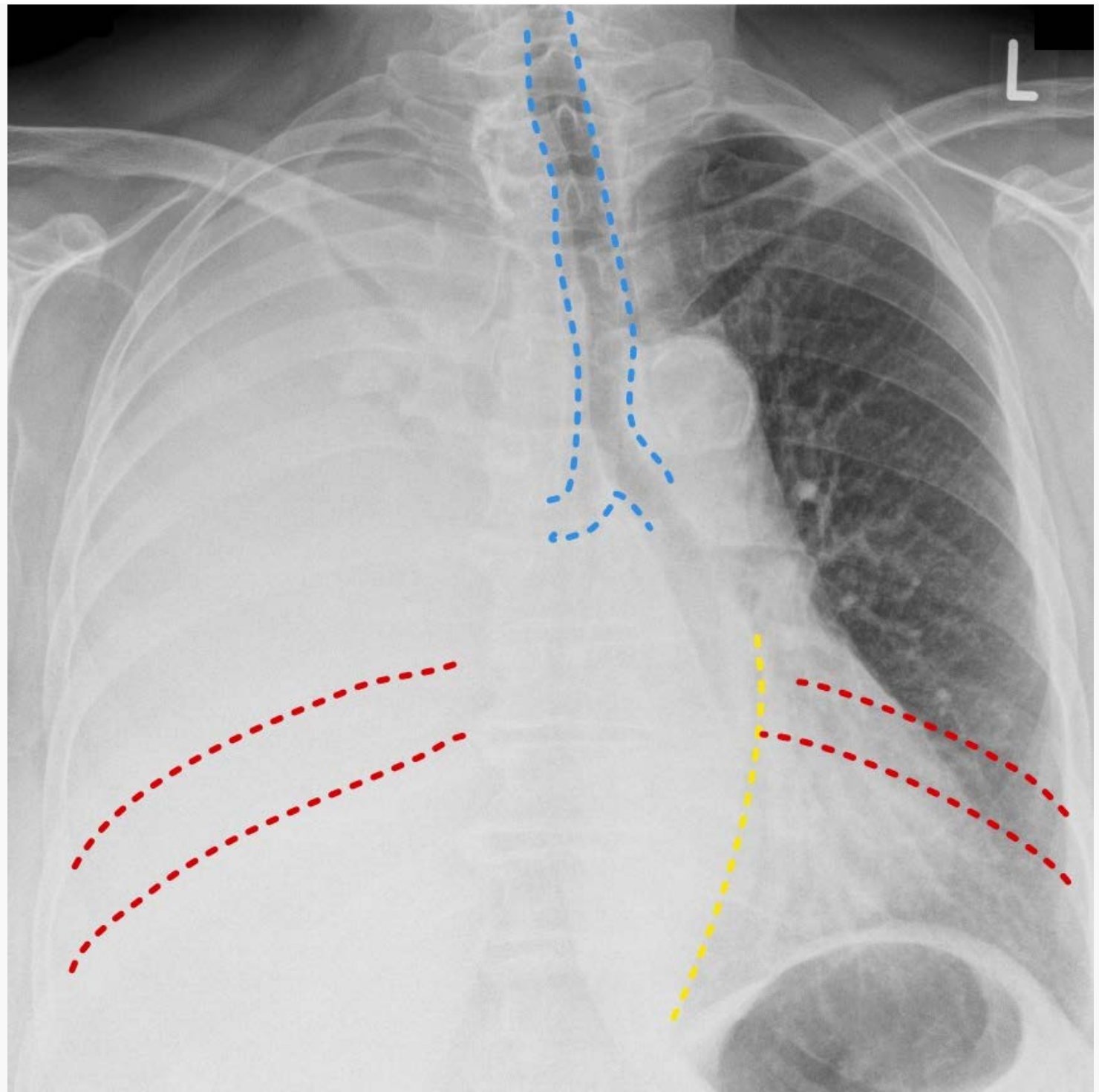
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Dashboard

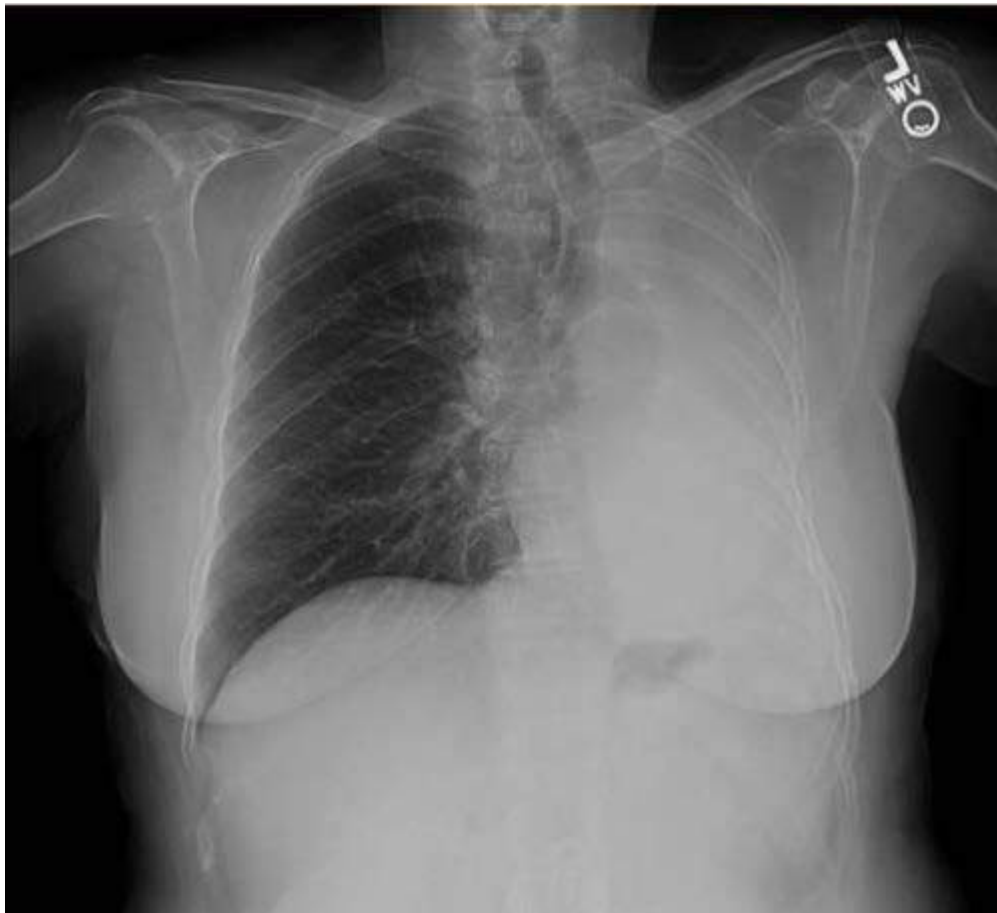
Overall score: **0%**
1 -



□ Question 114 of 200

□ □

A 70-year-old homeless woman is admitted to the Emergency Department after being found unconscious by staff at a local homeless shelter. She has a history of alcohol excess according to staff. On arrival in the department she appears to be intoxicated and confused. On examination you noticed heavy tar staining of the fingers and a pulse of 110/min which is irregularly irregular. Her respiratory rate is 16/min with oxygen saturations of 92% on room air. Breath sounds are reduced on the left side of the chest. A chest x-ray shows the following:



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What is the most likely diagnosis?

	Pleural effusion
	Pneumonia
	Pneumectomy
	Lung cancer
	Mesothelioma

Dashboard

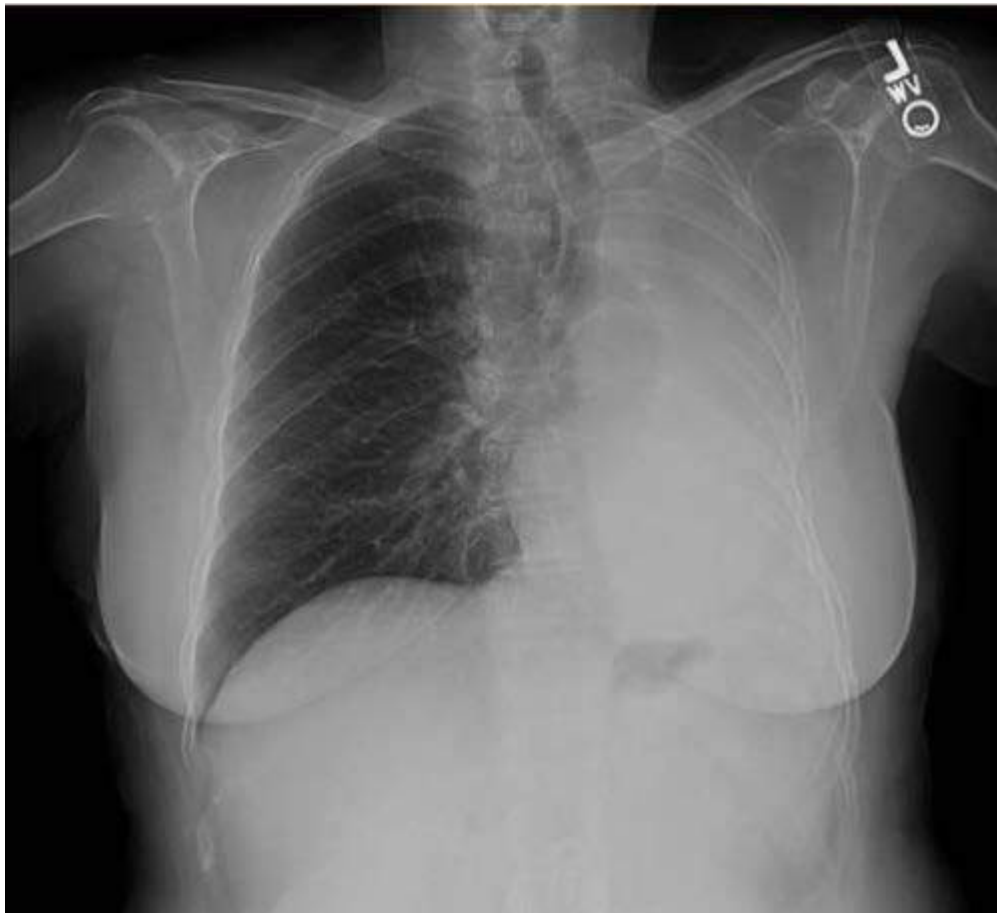
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1 -

□ Question 114 of 200

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What is the most likely diagnosis?

	Pleural effusion
	Pneumonia
	Pneumonectomy
	Lung cancer
	Mesothelioma

Dashboard

Overall score: **0%**
1 -

□ Question 114 of 200

□ □

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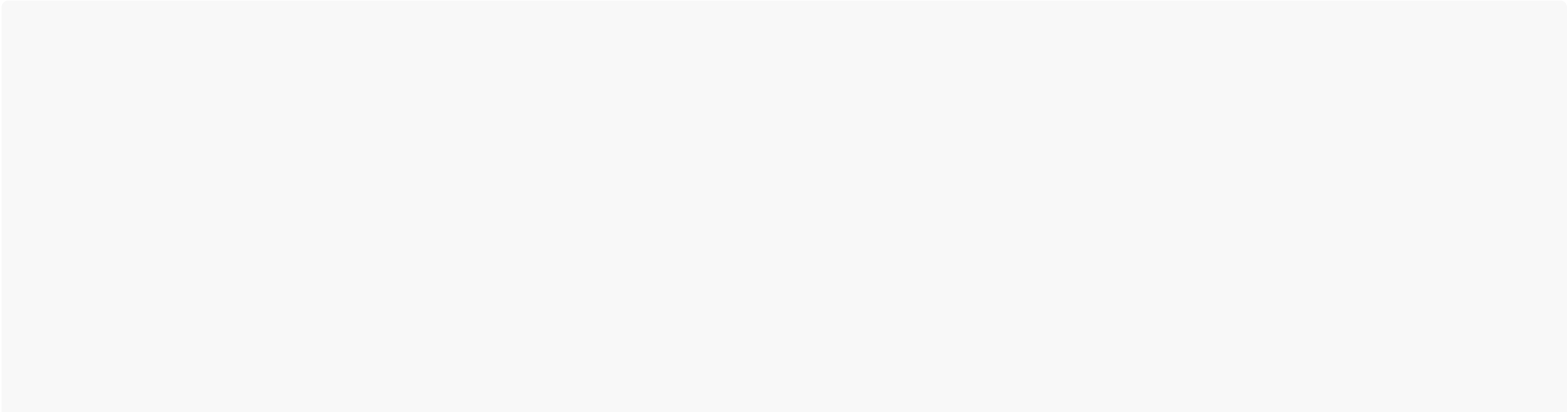
© Image used on license from Radiopaedia

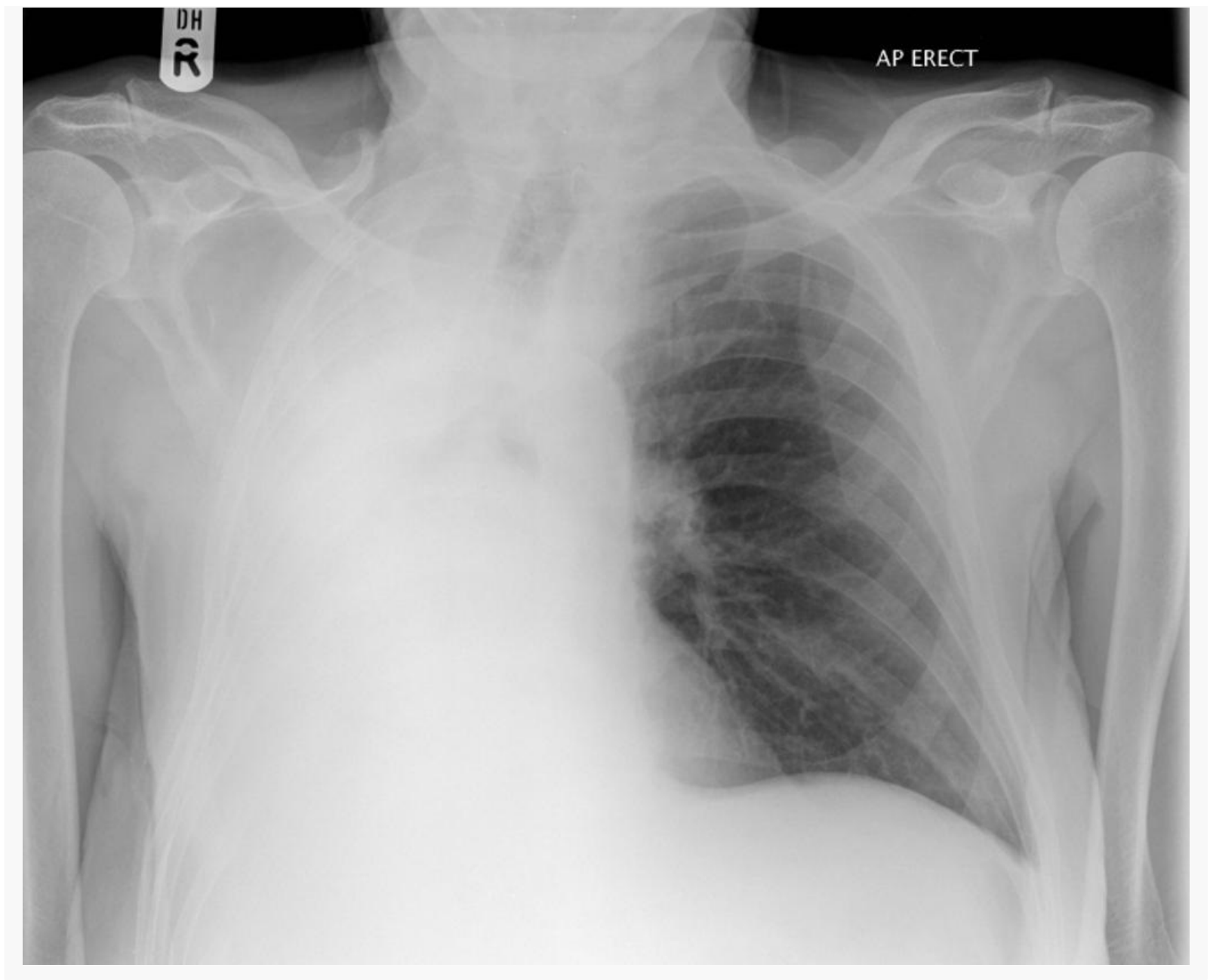
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Dashboard

Overall score: **0%**
1 -

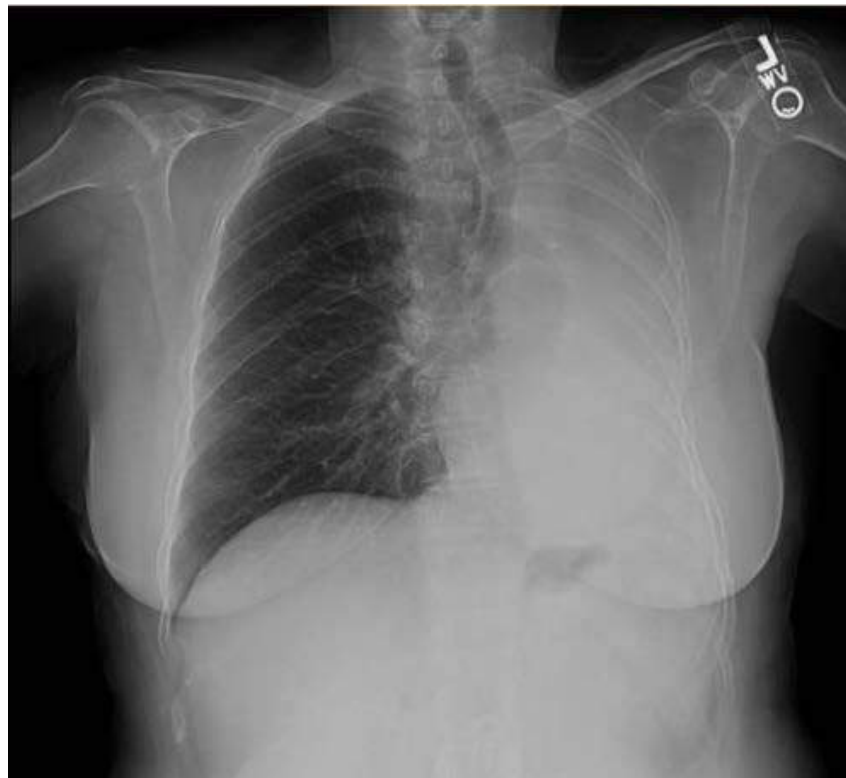




□ Question 114 of 200

□ □

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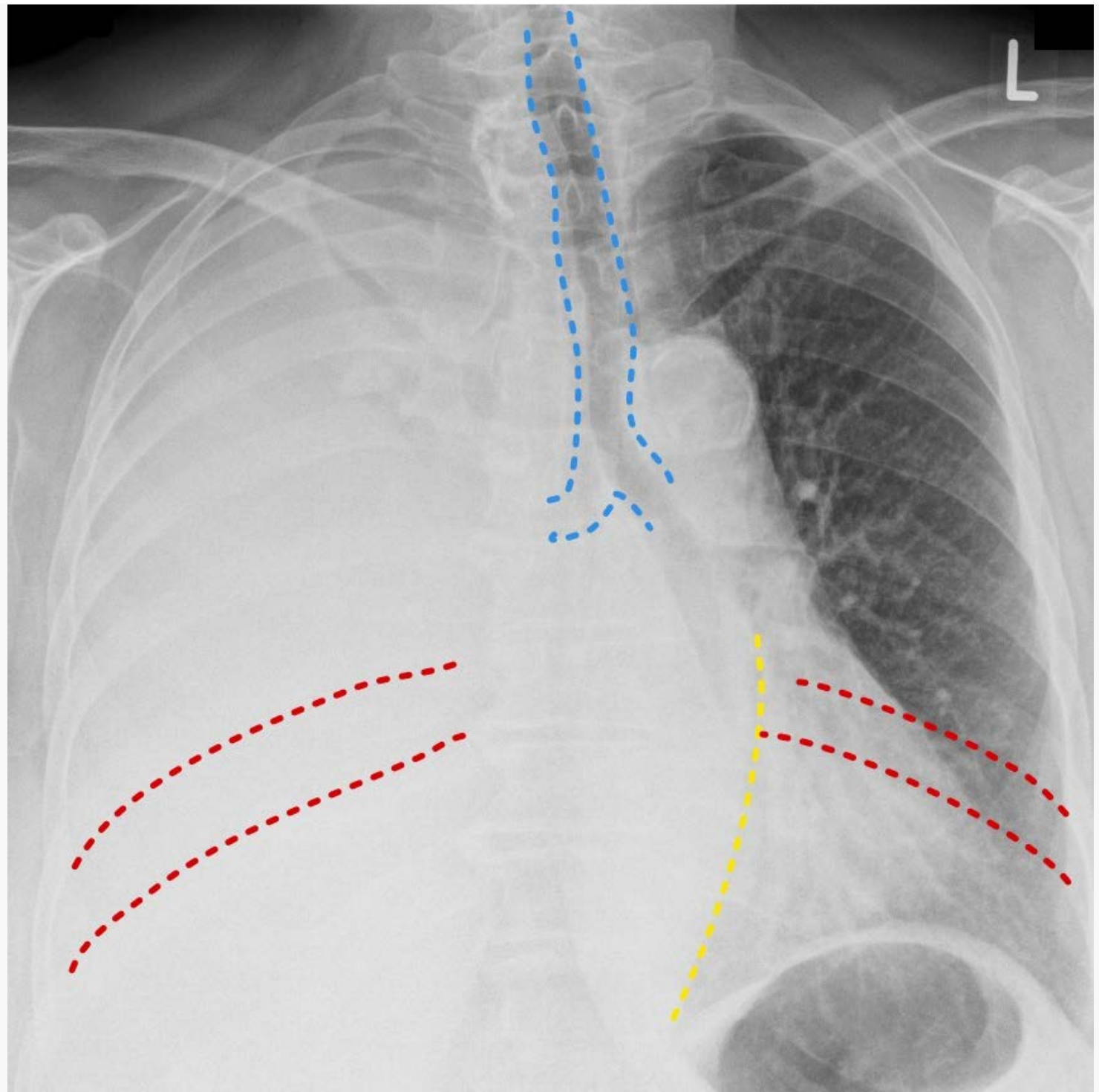
What is the most likely diagnosis?

	Pleural effusion
	Pneumonia
	Pneumectomy
	Lung cancer
	Mesothelioma

Dashboard

Overall score: 0%

1 -



Question 115 of 200



A 25-year-old man returns from an 8 week Mississippi river valley tour with a fever and coughing. He has a cough productive of yellow sputum. He takes no regular medication, is a non-smoker, and drinks 20 units of alcohol per week. On examination his blood pressure is 115/70 mmHg, pulse is 85 beats per minute and regular, his temperature is 37.9°C. He has axillary lymphadenopathy and there are coarse crackles throughout both lung fields.

Investigations

Chest X Ray - bilateral pulmonary infiltrates with areas of nodular shadowing

Hb	110 g/l	Na ⁺	140 mmol/l
Platelets	179 * 10 ⁹ /l	K ⁺	4.5 mmol/l
WBC	11.4 * 10 ⁹ /l	Urea	7.9 mmol/l
Neuts	8.1 * 10 ⁹ /l	Creatinine	90 µmol/l
Lymphs	1.5 * 10 ⁹ /l	CRP	89 mg/l
Eosin	0.9 * 10 ⁹ /l		

Which of the following is the most likely diagnosis?

	Histoplasmosis
	Q fever
	Tuberculosis
	<i>Mycoplasma pneumonia</i>
	Staphylococcal pneumonia

Dashboard

Overall score: **0%**

1 -

Question 115 of 200



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	Q fever
	Tuberculosis
	<i>Mycoplasma pneumonia</i>
	Staphylococcal pneumonia

Dashboard

Overall score: **0%**

1 -

Question 116 of 200

□ □

As the medical registrar on-call you are called to see a 25-year-old male in the Emergency Department (ED). The young male presented to the ED with a fever and productive cough of green sputum. When you arrive he looks unwell and although alert is a difficult historian.

Concerned, you immediately assess him from head to toe:

Airway	Airway patient, able to speak in sentences
Breathing	Sats 90% on room air, Resp Rate 25 / min, coarse creps bilaterally on auscultation
Circulation	Heart rate 110 beats per minute, blood pressure 90/55 mm/Hg
Disability	Glasgow coma scale 15/15, capillary blood glucose 5.5
Exposure	Multiple boils noted distributed widely across the patient's body

You inquire about the history of the boils identified on examination. The patient is unsure how long he has had them for, however, mentions that two of his family members recently were prescribed antibiotics by their family GP for similar lesions.

You start the patient on high flow oxygen, gain IV access taking blood cultures and give a fluid bolus. An urgent portable chest X-ray is requested which appears to show bilateral consolidation with multiple cavitating lesions.

What is the most likely diagnosis

	Streptococcal infection
	PVL-producing staphylococcal infection
	Tuberculosis
	Fungal chest infection
	Klebsiella infection

Dashboard

Overall score: **0%**

1 -

Question 116 of 200

□ □

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	PVL-producing staphylococcal infection
	Tuberculosis
	Fungal chest infection
	Klebsiella infection

Dashboard

Overall score: **0%**

1 -

Question 117 of 200

□ □

A 71-year-old gentleman presented to the emergency department with a headache, myalgia and fever. These symptoms all started one day ago. He has a past medical history of hypertension, ischaemic heart disease, type 2 diabetes, congestive cardiac failure and bilateral hip replacement. His medications include amlodipine, ramipril, aspirin, atorvastatin, gliclazide, calcium carbonate with colecalciferol (Adcal-D3) and paracetamol. He denies any allergies. He is concerned that he about influenza as he visited a friend in hospital last week who had been diagnosed with influenza A.

On examination, he appears sweaty and feels hot to touch. His chest is clear on auscultation. He is placed in a side room for observation and viral throat swabs are requested.

Observations:

Oxygen saturation	96% on room air
Respiratory rate	18/min
Blood pressure	129/93mmHg
Heart rate	77/min
Temperature	38.1°C

What is the most appropriate treatment?

	Supportive management only
	Salbutamol
	Zanamivir
	Amantadine
	Oseltamivir

Overall score: **0%**

1 -

Question 117 of 200

□ □

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	Supportive management only
	Salbutamol
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	Oseltamivir

Overall score: **0%**

1 -

Question 118 of 200

□ □

A 65-year-old lady with known severe emphysema attends the emergency department with breathlessness and is diagnosed with a non-infective exacerbation of chronic obstructive pulmonary disease. It is her 6th exacerbation this year. She tells you that she has been referred by her respiratory team for lung volume reduction surgery and is awaiting an appointment. Which of the following criteria would make the patient an unsuitable candidate for lung volume reduction surgery?

	Predominantly upper lobe emphysema and high exercise capacity.
	Non-upper lobe emphysema and high exercise capacity.
	Predominantly upper lobe emphysema and low exercise capacity.
	Upper lobe emphysema and carbon monoxide diffusing capacity 40%
	Non-upper lobe emphysema and low exercise capacity.

Dashboard

Overall score: 0%

1 -

Question 118 of 200

□ □

A 65-year-old lady with known severe emphysema attends the emergency department with breathlessness and is diagnosed with a non-infective exacerbation of chronic obstructive pulmonary disease. It is her 6th exacerbation this year. She tells you that she has been referred by her respiratory team for lung volume reduction surgery and is awaiting an appointment. Which of the following criteria would make the patient an unsuitable candidate for lung volume reduction surgery?

	Predominantly upper lobe emphysema and high exercise capacity.
	Non-upper lobe emphysema and high exercise capacity.
	Predominantly upper lobe emphysema and low exercise capacity.
	Upper lobe emphysema and carbon monoxide diffusing capacity 40%
	Non-upper lobe emphysema and low exercise capacity.

Dashboard

Overall score: **0%**

1 -

Question 119 of 200

□ □

A 57-year-old male is seen in the respiratory clinic with a three months history of a productive cough, weight loss and drenching night sweats. He reports that he is producing approximately 1 cup of green sputum each day and has lost 4 kgs during the same time period. He has smoked 20 cigarettes a day since he was 15 years old. He last traveled abroad 2 years ago, visiting family in North America.

The GP has performed routine blood tests which are unremarkable and a HIV test is negative. Several sputum samples have been sent for routine microscopy, culture & sensitivities (MC&S) growing only normal respiratory flora. Following a normal chest X-ray, you perform a high resolution CT (HRCT) scan. This demonstrates right middle lobe and left lower lobe bronchiectasis with multiple nodules in both lungs.

What other initial investigation would you perform to help reach a diagnosis?

	Sweat test
	PET-CT Scan
	Repeat HRCT scan in 3-6 months
	Sputum for acid fast bacilli (AFB)
	Bronchoscopy +/- biopsies

Dashboard

Overall score: 0%

1 -

Question 119 of 200

□ □

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	Sweat test
	PET-CT Scan
	Repeat HRCT scan in 3-6 months
	Sputum for acid fast bacilli (AFB)
	Bronchoscopy +/- biopsies

Dashboard

Overall score: **0%**

1 -

□ Question 120 of 200

□ □

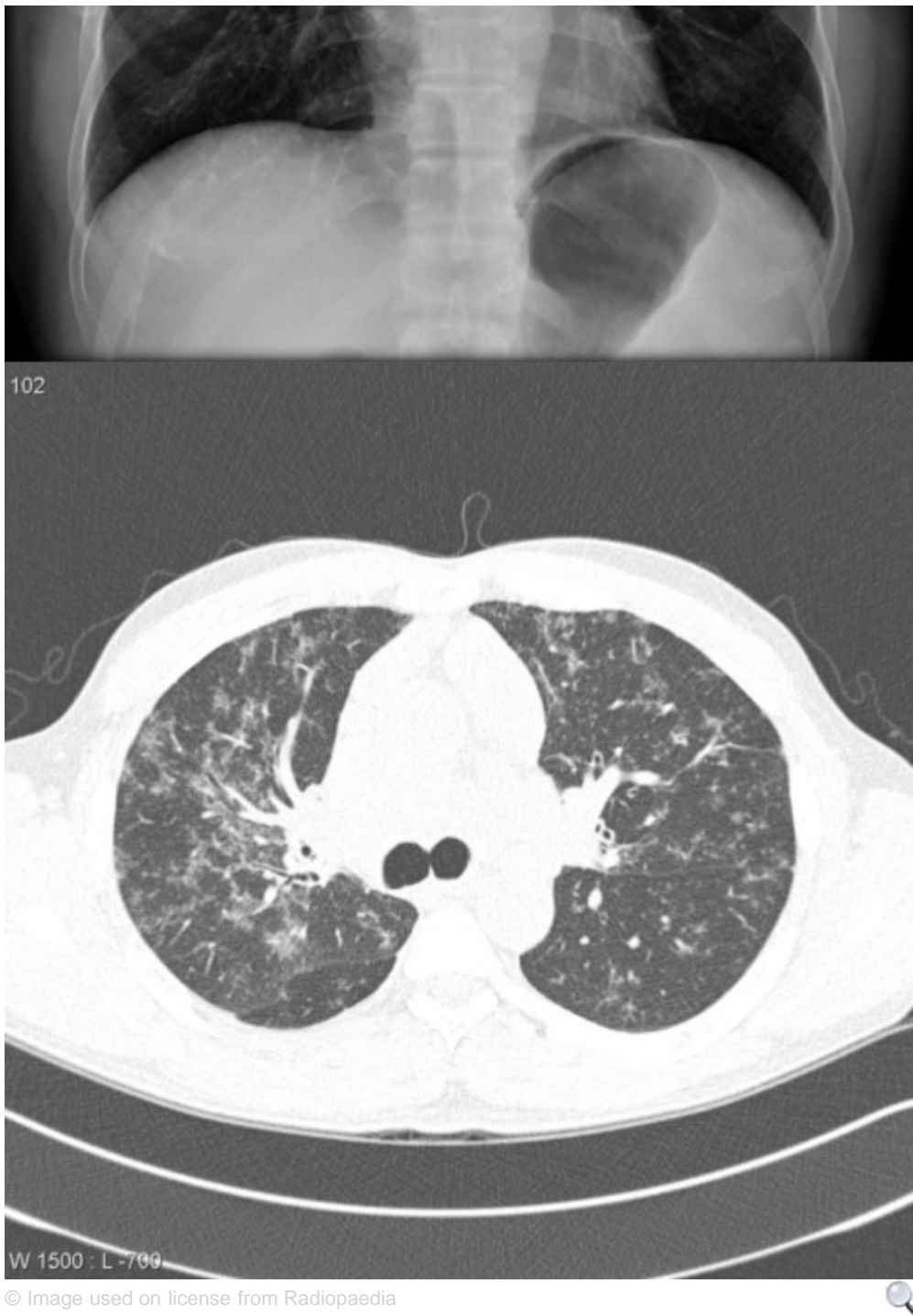
A 40-year-old man is investigated for fatigue and a dry cough. These symptoms have been getting gradually worse for the past 2-3 months. He is generally fit and well although does have a 20-pack-year history of smoking.

Bloods show the following:

Hb	14.5 g/dl	Na ⁺	141 mmol/l	Bilirubin	15 µmol/l
Platelets	222 * 10 ⁹ /l	K ⁺	3.6 mmol/l	ALP	106 u/l
WBC	5.9 * 10 ⁹ /l	Urea	6.2 mmol/l	ALT	22 u/l
		Creatinine	81 µmol/l	γGT	34 u/l
Adj calcium	2.20 mmol/l			Albumin	40 g/l

A chest x-ray is ordered with results in a follow-up CT scan of his chest:





© Image used on license from Radiopaedia

An ECG is taken and is normal. Lung function tests are also requested:

FEV1	4.25 L (97% of predicted)
FVC	5.30 L (104% of predicted)
FEV1/FVC	80%

What is the most appropriate management?

	No treatment at this stage
--	----------------------------

	Oral prednisolone
	Intravenous immunoglobulin
	A trial of a salbutamol inhaler
	Rifampicin, ethambutol, isoniazid and pyrazinamide

Dashboard

Overall score: **0%**

1 -

□ Question 120 of 200

□ □

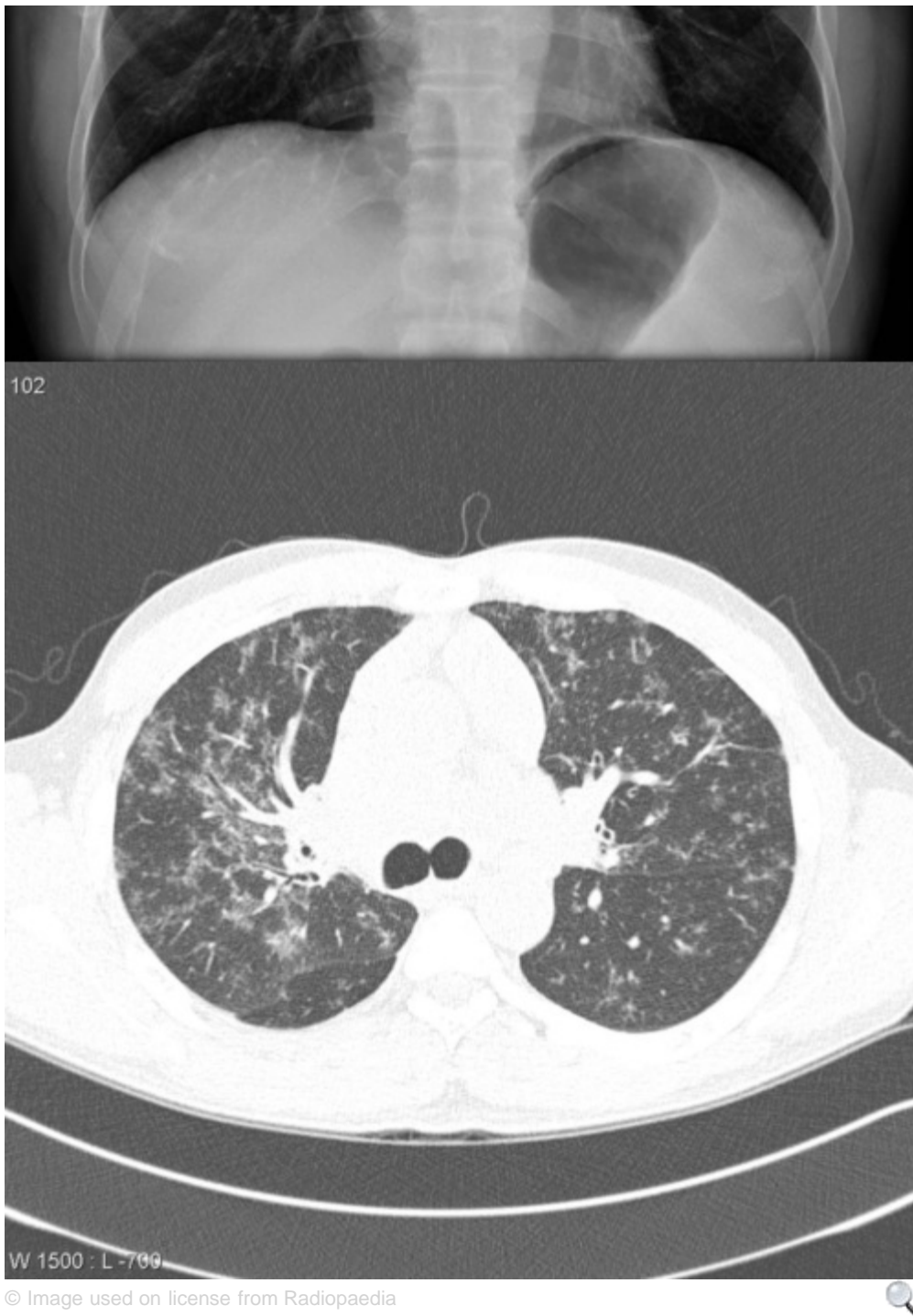
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FVC	5.30 L (104% of predicted)
FEV1/FVC	80%

What is the most appropriate management?

No treatment at this stage

	Oral prednisolone
	Intravenous immunoglobulin
	A trial of a salbutamol inhaler
	Rifampicin, ethambutol, isoniazid and pyrazinamide

Dashboard

Overall score: **0%**
1 -

Question 121 of 200

□ □

A 46-year-old woman is reviewed prior to discharge due to abnormal findings on a CT pulmonary angiogram (CTPA). She had originally presented with chest pain. Her past medical history only included fractures of the tibia and fibula whilst intoxicated two weeks ago. She has no family history of cancer, and she does not smoke. She works as a teacher. On admission, she had sinus tachycardia, but this has settled, as has the chest pain. She had no abnormalities on examination, and it was noted that she was wearing a below knee plaster of Paris.

An ECG demonstrated sinus tachycardia on admission with a rate of 108/min. She underwent a CTPA which demonstrated no pulmonary embolism but incidentally detected a 4mm solid pulmonary nodule. She is due to be discharged as the chest pain has settled. How should the pulmonary nodule be investigated or monitored?

	Urgent image-guided biopsy
	Urgent CT-PET
	CT chest in three months
	CT chest in one year
	No further investigations or monitoring needed

Dashboard

Overall score: 0%

1 -

Question 121 of 200

□ □

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	Urgent image-guided biopsy
	Urgent CT-PET
	CT chest in three months
	CT chest in one year
	No further investigations or monitoring needed

Dashboard

Overall score: **0%**

1 -

□ Question 122 of 200



A 69-year-old man with a history of rheumatoid arthritis well controlled on methotrexate presents with gradual pain and swelling in his wrists and ankles.

The pain is described as a dull ache that is intermittent, often worse in the evenings. There is associated swelling which can sometimes feel warm. He has tried regular paracetamol but this has had limited effect.

He also describes a chronic cough and shortness of breath on exertion for the past 6 months that he has not mentioned to his GP. There has been no haemoptysis and he denies any fevers. His wife has noticed that he has been losing weight recently.

He has a past medical history of rheumatoid arthritis, hypertension, hypercholesterolaemia and type 2 diabetes mellitus. He currently takes methotrexate weekly, folic acid 5mg weekly, ramipril 5mg, simvastatin 20mg at night, metformin 500mg three times a day and paracetamol 1g four times daily.

He is a retired accountant and a current smoker with a 50 pack year smoking history. He drinks approximately 30 units of beer a week. He denies any recent foreign travel.

On examination, he is cachectic and short of breath on exertion. His pulse is 80/min and regular, blood pressure 140/93 mmHg, oxygen saturations of 93% on air. He has marked fingernail clubbing. Examination of his wrists reveals slightly swollen and tender joints. Swan neck and ulnar deviation deformities are noted in both hands. Other than his wrists, no other joint abnormalities are detected. Examination of the peripheral nervous system is normal.

Examination of his chest is normal with no focal consolidation.

Initial bloods are as follows:

Na ⁺	134 mmol/L
K ⁺	3.9 mmol/L
Urea	7.8 mmol/L
Creatinine	105 µmol/L
Hb	100 g/L

WBC	6.0x10 ⁹ /L
Platelets	200x10 ⁹ /L
LFTs	Normal
Serum uric acid	410 µmol/L
CRP	12 mg/L

Chest X-ray reveals a discrete opacification at the periphery of the right middle lobe.

What is the most likely underlying diagnosis?

	Methotrexate induced pulmonary fibrosis
	Bronchogenic carcinoma
	Caplan's syndrome
	Chronic obstructive pulmonary disease
	Pneumonia

Dashboard

Overall score: 0%

1 -

□ Question 122 of 200



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	Methotrexate induced pulmonary fibrosis
	Bronchogenic carcinoma
	Caplan's syndrome
	Chronic obstructive pulmonary disease
	Pneumonia

Dashboard

Overall score: **0%**

1 -

Question 123 of 200

A 56-year-old woman presents to clinic for review following investigations and MDT discussion. She has chronic exertional dyspnoea and following a restrictive pattern detected on spirometry and changes on high-resolution CT scanning she has been diagnosed with idiopathic pulmonary fibrosis. What medication can be used to modify disease progression?

<input type="checkbox"/>	Azathioprine
<input type="checkbox"/>	Prednisolone
<input type="checkbox"/>	Co-trimoxazole
<input type="checkbox"/>	Sildenafil
<input type="checkbox"/>	Pirfenidone

Dashboard

Overall score: **0%**

1 -

Question 123 of 200

□ □

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	Sildenafil
	Pirfenidone

Dashboard

Overall score: **0%**

1 -

Question 123 of 200

□ □

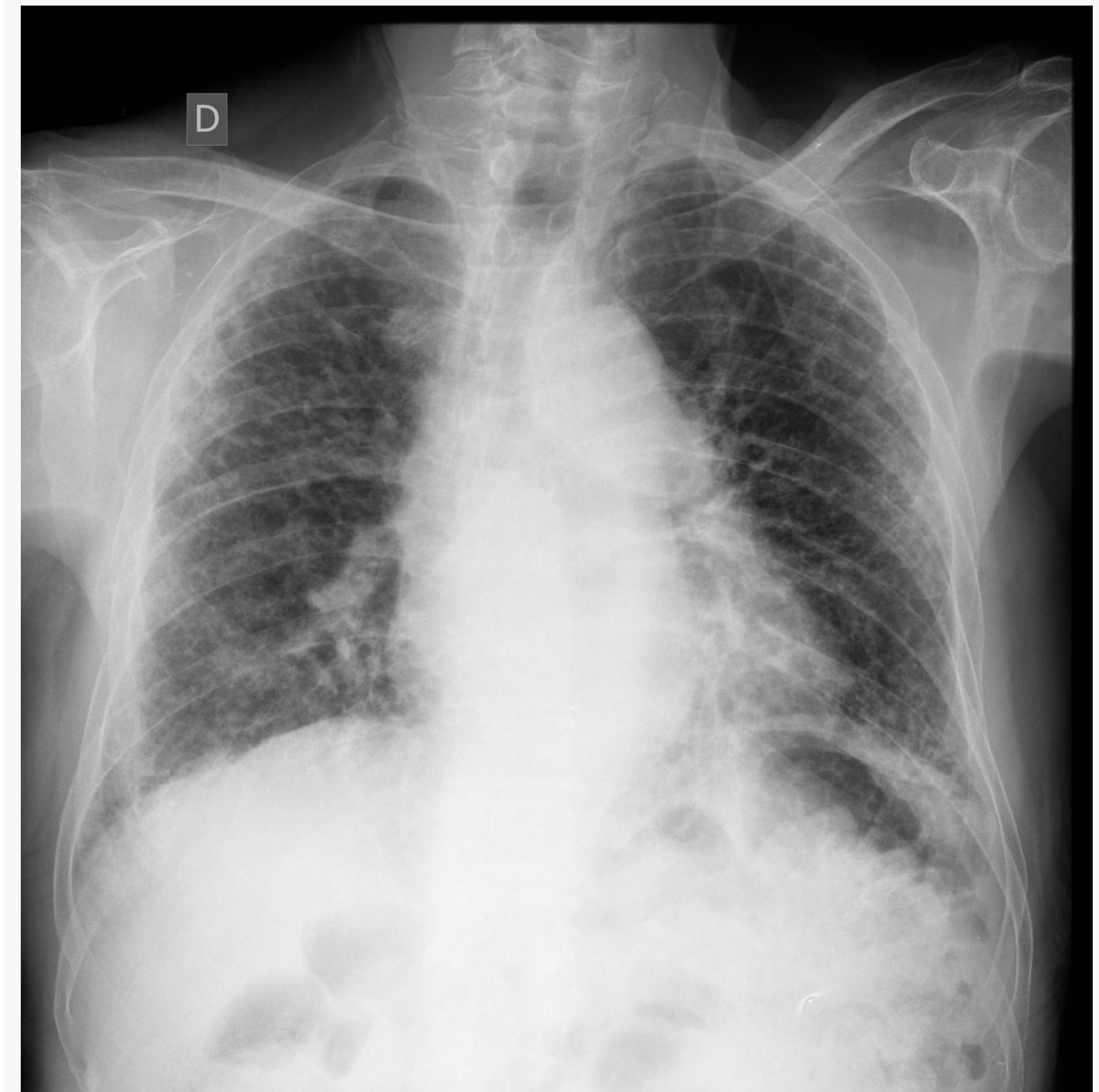
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	Prednisolone
	Co-trimoxazole
	Sildenafil
	Pirfenidone

Dashboard

Overall score: **0%**

1 -





Question 123 of 200

□ □

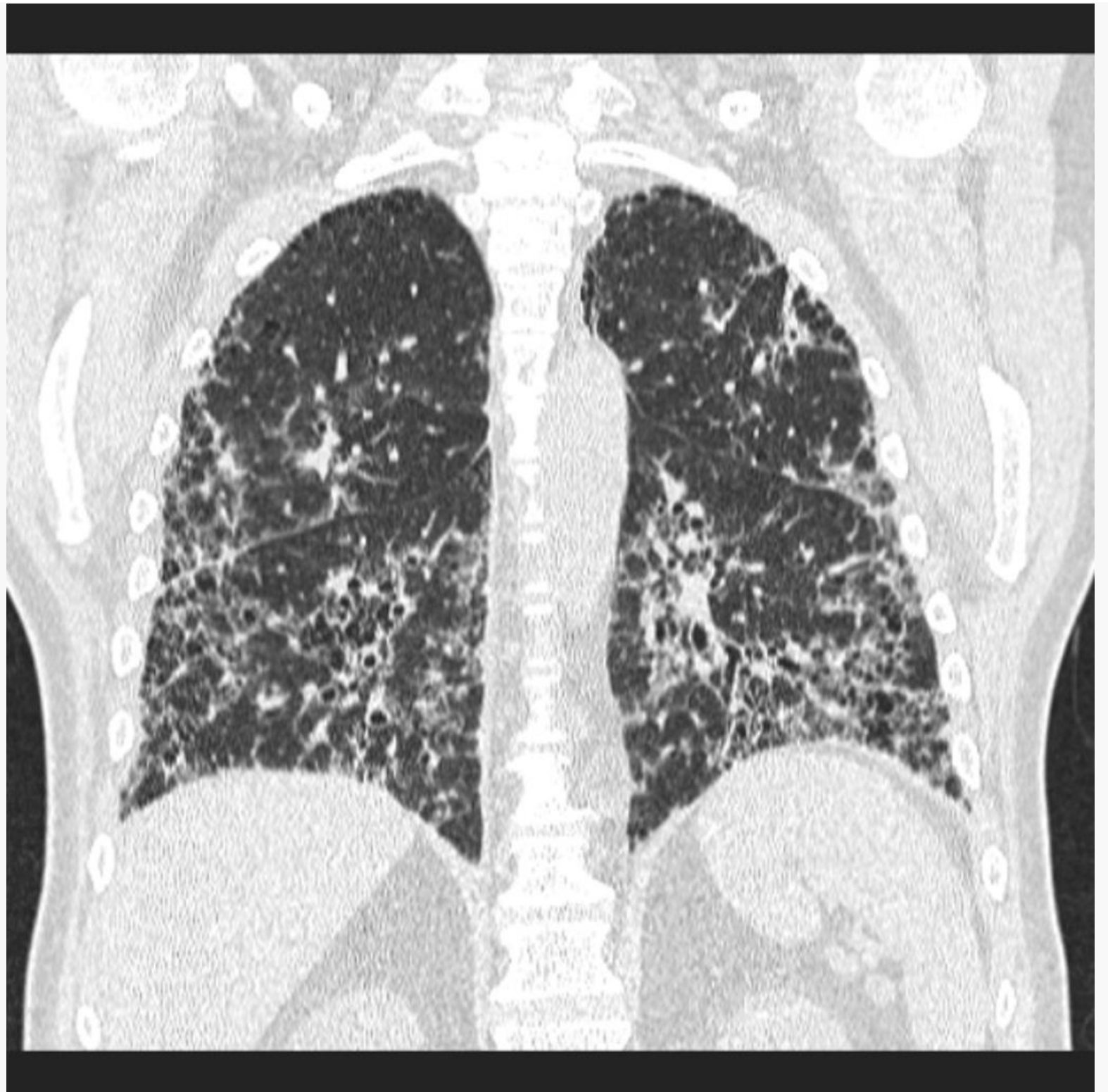
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	Azathioprine
	Prednisolone
	Co-trimoxazole
	Sildenafil
	Pirfenidone

Dashboard

Overall score: **0%**

1 -



□ Question 123 of 200

□ □

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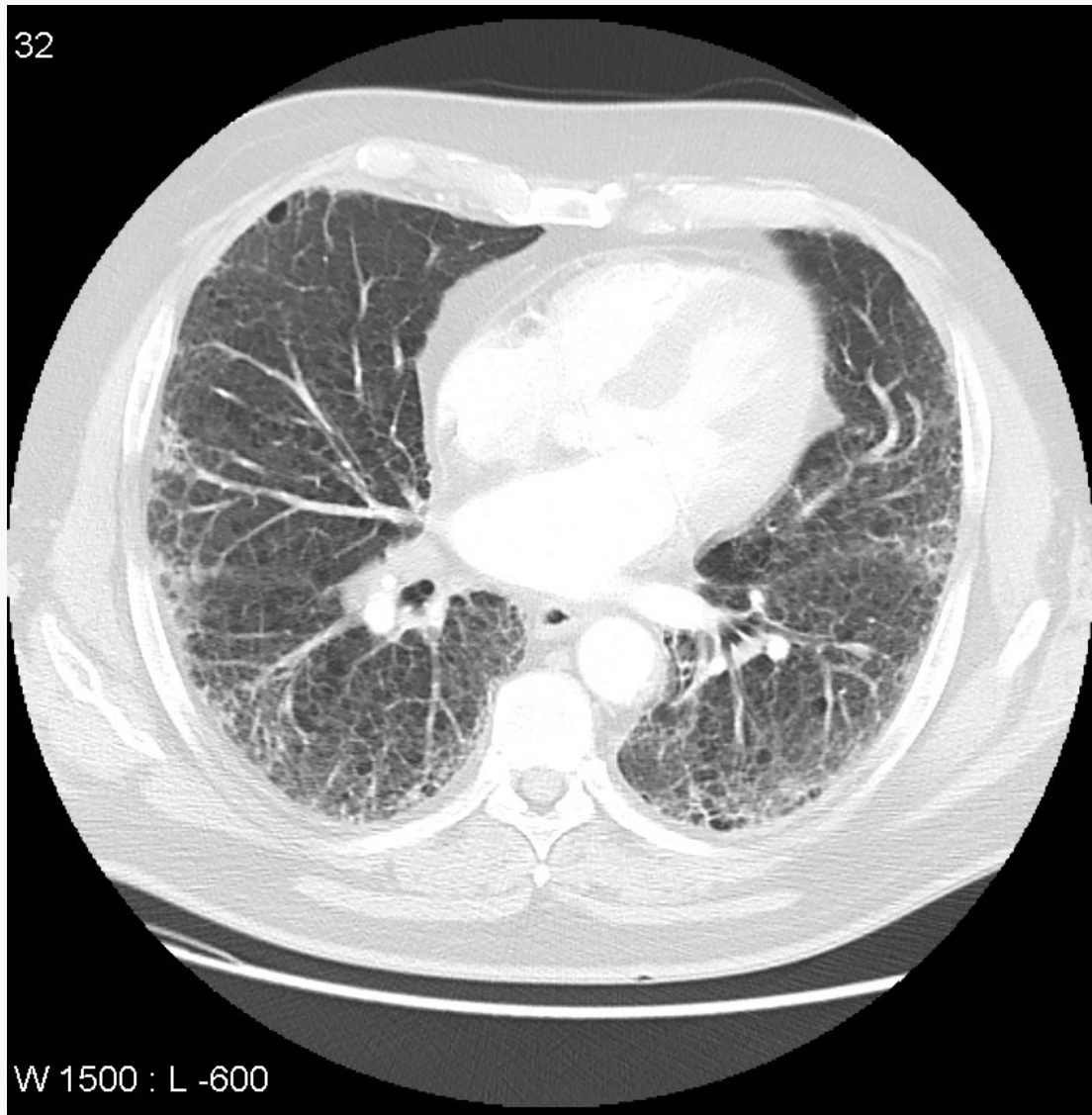
	Azathioprine
	Prednisolone
	Co-trimoxazole
	Sildenafil
	Pirfenidone

Dashboard

Overall score: 0%

1 -

32



Question 124 of 200

□ □

A 52-year-old woman presents to the respiratory clinic with breathlessness. She was referred from her GP who was concerned about breathlessness and a chest X-ray demonstrating left pleural effusion. She had recently undergone a left-sided wide local excision with axillary clearance for ductal carcinoma in situ.

She has unilaterally reduced breath sounds with dullness on percussion and deviation of the trachea away from that side of her chest. A plural aspirate is obtained and is milky white in colour. The two possibilities considered are chylothorax from pseudochylothorax.

What investigation would aid in distinguishing chylothorax from pseudochylothorax?

	pH
	Albumin
	Microscopy
	Triglycerides
	Amylase

Dashboard

Overall score: 0%

1 -

Question 124 of 200

□ □

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What investigation would aid in distinguishing chylothorax from pseudochylothorax?

	pH
	Albumin
	Microscopy
	Triglycerides
	Amylase

Dashboard

Overall score: 0%

1 -

Question 125 of 200

□ □

A 64-year-old woman presents to the emergency department with breathlessness. She has been feeling progressively breathless over the last two weeks with marked reduction in her exercise tolerance. She now finds that even a few steps make her short of breath whilst normally she would be able to walk to her local shops and back. She finds that she cannot lie down as it makes her feel worse. She has a past medical history of hypertension, previous myocardial infarction and asthma.

On examination, she has a raised JVP, bilateral crepitations on auscultation, reduced air entry in both bases and dull percussion. On her chest X-ray, there is evidence of pulmonary oedema and bilateral pleural effusions. What is the most appropriate management plan?

	Treat medically with diuretics
	Pleural aspirate and if exudate insert chest drain
	Insert chest drain on one side
	Insert chest drain on both sides
	Non-invasive ventilation

Dashboard

Overall score: 0%

1 -

Question 125 of 200

□ □

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	Insert chest drain on one side
	Insert chest drain on both sides
	Non-invasive ventilation

Dashboard

Overall score: **0%**

1 -

□ Question 126 of 200



A 17-year-old male is admitted to the resuscitation area of the emergency department with an acute exacerbation of asthma. It is his 3rd hospital attendance this winter. He has widespread wheeze, globally poor air entry and looks tired. He cannot complete full sentences. His arterial blood gases reveal:

pH	7.4
PaO ₂	9.3 kPa
PaCO ₂	3.3 kPa
HCO ₃ ⁻	26 mmol/L

You treat him with 100% oxygen, high dose steroids, back to back salbutamol nebulisers and commence intravenous magnesium sulphate infusion. 1 hour later his arterial blood gases reveal:

pH	7.35
PaO ₂	15.4 kPa
PaCO ₂	4.7 kPa
HCO ₃ ⁻	22 mmol/L

What is the next management step?

	Start BIPAP
	Intensive care review
	Move to medical ward with close monitoring
	Intravenous adrenaline
	Start CPAP

Dashboard

Overall score: **0%**

1 -

Question 126 of 200

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<input checked="" type="checkbox"/>	Intensive care review
<input type="checkbox"/>	Move to medical ward with close monitoring
<input type="checkbox"/>	Intravenous adrenaline
<input type="checkbox"/>	Start CPAP

Dashboard

Overall score: **0%**

1 -

Question 127 of 200

□ □

A 30-year-old black man presents with a 7-day history of tender lumps over his shins, painful ankles, shortness of breath and lethargy. He described a preceding history of a mild coryzal illness.

On examination there are erythematous subcutaneous nodules over his shins and synovitis of both ankles.

What is the most useful diagnostic investigation?

	Anti-nuclear antibodies (ANA)
	Biopsy of nodules
	Chest x-ray
	C-reactive protein (CRP)
	Kveims test

Dashboard

Overall score: 0%

1 -

Question 127 of 200

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	Biopsy of nodules
	Chest x-ray
	C-reactive protein (CRP)
	Kveims test

Dashboard

Overall score: **0%**

1 -

Question 128 of 200

□ □

A 30 year old man presents with a chronic productive cough and a history of recurrent chest infections since childhood. He and his wife had been referred to infertility clinic as they have been trying to have a child for a few years. He has had a Sodium sweat test which has come back normal. Laboratory investigations show hypogammaglobulinaemia and otherwise normal bloods. What is the most likely diagnosis?

	Bronchiectasis
	Chediak-Higashi Syndrome
	Cystic fibrosis
	Primary ciliary dyskinesia
	Situs inversus

Dashboard

Overall score: 0%

1 -

Question 128 of 200

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	Bronchiectasis
	Chediak-Higashi Syndrome
	Cystic fibrosis
	Primary ciliary dyskinesia
	Situs inversus

Dashboard

Overall score: **0%**

1 -

Question 129 of 200

□ □

A 53-year-old gentleman presents to the respiratory clinic for review. He has a history of chronic recurrent coughing episodes lasting for months. This has been worse over winters. He also has found that over the last two years his exercise tolerance has reduced and that he is more easily short of breath. He has no past medical history and takes no regular medications. He has a 20 pack-year history. He has undergone spirometry with shows an FEV1/FVC ratio of 63%, whilst FEV1 is 74% of predicted. His chest X-ray is unremarkable. Blood tests are normal as well. Previous sputum sample from during an exacerbation shows growth with pseudomonas. What factor is not in keeping with a diagnosis of COPD?

	FEV1/FVC ratio
	Pseudomonas
	FEV1
	Smoking history
	Clinical history

Dashboard

Overall score: 0%

1 -

Question 129 of 200

□ □

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	FEV1/FVC ratio
	Pseudomonas
	FEV1
	Smoking history
	Clinical history

Dashboard

Overall score: **0%**

1 -

Question 130 of 200



A 67-year-old gentleman presents with a three-day history of a productive cough. He complains that over the last two days he has been progressively more short of breath, He complains of feeling very weak and lethargic and on further questioning reports fevers and rigors. His wife brought him to the emergency department as she was concerned as he appeared to be deteriorating rapidly.

Observations are: heart rate 125 beats per minute, respiratory rate 32 breaths per minute, S_aO_2 90% on room air, temperature 38.9°, blood pressure is 130/84 mmHg.

He appears distressed but is not confused.

Initial investigations show:

Hb	134 g/l
Platelets	$550 \times 10^9/l$
WBC	$18 \times 10^9/l$

Na^+	141 mmol/l
K^+	3.7 mmol/l
Urea	9.2 mmol/l
Creatinine	130 μ mol/l

Chest x-ray shows left lower zone consolidation.

From the above information, what is his CURB-65 score?

	1
	2

	3
	4
	5

Dashboard

Overall score: **0%**
1 -

Question 130 of 200



A 67-year-old gentleman presents with a three-day history of a productive cough. He complains that over the last two days he has been progressively more short of breath, He complains of feeling very weak and lethargic and on further questioning reports fevers and rigors. His wife brought him to the emergency department as she was concerned as he appeared to be deteriorating rapidly.

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From the above information, what is his CURB-65 score?

1	
2	

	3
	4
	5

Dashboard

Overall score: **0%**
1 -

Question 131 of 200

□ □

A 32-year-old man has a long history of asthma and over the last eight weeks, he has been needing to use his salbutamol inhaler four times per week in order to manage asthma symptoms. Prior to this, he was also waking up once per night due to the symptoms but since the introduction of a long-acting beta 2 agonist in combination to the regular two puffs twice a day of 100 micrograms beclometasone that he takes the nighttime symptoms have resolved. He has good inhaler technique and is compliant with medications. He works in sales and has never had any identifiable environmental triggers for his asthma. What is the next best step in his management?

	Keep him on the same medications and review him again in 3 months time
	Change beclometasone to 200 micrograms taken two puffs twice a day
	Add in leukotriene receptor antagonist
	Add in tiotropium 18 micrograms once daily
	Add in sustained-release (SR) theophylline

Dashboard

Overall score: 0%

1 -

□ Question 131 of 200

□ □

A 32-year-old man has a long history of asthma and over the last eight weeks, he has been needing to use his salbutamol inhaler four times per week in order to manage asthma symptoms. Prior to this, he was also waking up once per night due to the symptoms but since the introduction of a long-acting beta 2 agonist in combination to the regular two puffs twice a day of 100 micrograms beclometasone that he takes the nighttime symptoms have resolved. He has good inhaler technique and is compliant with medications. He works in sales and has never had any identifiable environmental triggers for his asthma. What is the next best step in his management?

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	Add in leukotriene receptor antagonist
	Add in tiotropium 18 micrograms once daily
	Add in sustained-release (SR) theophylline

Dashboard

Overall score: **0%****1** -

Question 132 of 200

□ □

A 75-year-old man is admitted to hospital with haemoptysis and dyspnoea. He is a life-long smoker and a coin lesion is seen in the right middle zone on chest x-ray. He also complains of pain in his left forearm. An x-ray is requested:



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What is the most likely cause of the patients arm pain?

PTHrP-induced subperiosteal bone resorption and osteopaenia

	Pathological fracture of the radial head
	Long-standing osteoarthritic changes
	Hypertrophic pulmonary osteoarthropathy
	Metastatic lung cancer

Dashboard

Overall score: **0%**
1 -

Question 132 of 200

□ □

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Dashboard

Overall score: **0%**
1 -

Question 132 of 200

□ □

A 75-year-old man is admitted to hospital with haemoptysis and dyspnoea. He is a life-long smoker and a coin lesion is seen in the right middle zone on chest x-ray. He also complains of pain in his left forearm. An x-ray is requested:



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What is the most likely cause of the patients arm pain?

	PTHrP-induced subperiosteal bone resorption and osteopaenia
	Pathological fracture of the radial head
	Long-standing osteoarthritic changes
	Hypertrophic pulmonary osteoarthropathy
	Metastatic lung cancer

Dashboard

Overall score: **0%**
1 -



Question 133 of 200

□ □

A 30 year-old lady with a diagnosis of asthma is reviewed in general practice. She is currently taking a salbutamol inhaler as required along with inhaled corticosteroid 200micrograms twice a day.

After a recent review she had been prescribed salmeterol 100µg twice a day. There was some improvement with this but she is currently continuing to require her salbutamol inhaler 2-6 times/day.

Which of the following medication adjustments is the most appropriate?

	Add regular oral prednisolone
	Add regular oral modified release theophylline
	Add regular oral leukotriene receptor antagonist
	Increase regular inhaled steroid dose
	Add regular inhaled ipratropium

Dashboard

Overall score: 0%

1 -

Question 133 of 200

□ □

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Dashboard

Overall score: **0%**

1 -

Question 134 of 200

A 21-year-old man is admitted to the specialist burns unit with severe burns following a house fire. He is haemodynamically stable and receives IV fluids and oxygen, although does not require intubation. Three days after his admission, he develops acute-onset shortness of breath. The only past medical history reported was hay-fever as a child and his mother has relapsing-remitting multiple sclerosis. He smoked 1-2 roll-up cigarettes per week and did not drink any alcohol.

His observations include a respiratory rate of 28 breaths per minute, oxygen saturations of 91% on 12L of oxygen, a heart rate of 112 beats per minute and blood pressure of 114/78 mmHg. His temperature was 36.9°C. Examination revealed widespread crackles over both lung fields.

Chest x-ray reveals bilateral infiltrates.

What is the most likely diagnosis?

	Hospital-acquired pneumonia
	Pneumonitis
	Acute respiratory distress syndrome
	Renal failure
	Asthma attack

Dashboard

Overall score: 0%

1 -

Question 134 of 200



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Chest x-ray reveals bilateral infiltrates.

What is the most likely diagnosis?

	Hospital-acquired pneumonia
	Pneumonitis
	Acute respiratory distress syndrome
	Renal failure
	Asthma attack

Dashboard

Overall score: 0%

1 -

□ Question 135 of 200

□ □

A 57-year-old is admitted with confusion, fever and decreased oral intake. His past medical history is significant for type 2 diabetes mellitus, hypertension, osteoarthritis and gout. Blood cultures are positive for *E. coli*. Despite antibiotic therapy, he slips into respiratory failure. He is intubated and placed on mechanical ventilation with an FiO_2 of 70%, tidal volume of 370 ml and respiratory rate of 14/min.

His current arterial blood gases are:

pH	7.45
pO_2	7.86 kPa
pCO_2	3.99 kPa
HCO_3	21 mmol/l

Which of the following is the best next step in managing this patient?

	Increase tidal volume
	Increase respiratory rate
	Increase the fraction of inspired oxygen
	Add positive end-expiratory pressure
	Decrease the fraction of inspired oxygen

Dashboard

Overall score: 0%

1 -

□ Question 135 of 200

□ □

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	Decrease the fraction of inspired oxygen

Dashboard

Overall score: 0%

1 -

Question 136 of 200

A 56-year-old male presents with symptoms and signs consistent with exacerbation of chronic obstructive pulmonary disease (COPD). This is his fourth exacerbation in the last two months. His most recent FEV₁ is 40%. He is currently taking salbutamol as required and tiotropium bromide once daily regimen. Which of the following drugs should be added next to his regular control of COPD?

<input type="checkbox"/>	Seretide
<input type="checkbox"/>	Salmeterol
<input type="checkbox"/>	Theophylline
<input type="checkbox"/>	Ipratropium bromide
<input type="checkbox"/>	Long term oxygen therapy

Dashboard

Overall score: **0%**

1 -

Question 136 of 200

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<input type="checkbox"/>	Ipratropium bromide
<input type="checkbox"/>	Long term oxygen therapy

Dashboard

Overall score: **0%**

1 -

□ Question 137 of 200



A 72-year-old man was admitted to hospital with an exacerbation of his longstanding chronic obstructive airways disease. The patient's regular treatment for COPD included home oxygen, home bronchodilator nebulisers and high-dose inhaled steroids. Normal exercise tolerance was very limited with the patient becoming profoundly breathless after mobilising only short distances around his house. Following an admission to the intensive care unit for respiratory support the previous winter the patient had expressed a wish that he would not want non-invasive ventilation or intubation in the future and stated that control of his symptoms was his priority.

Treatment with prednisolone, nebulised bronchodilators and antibiotics was started on admission. Having been profoundly dyspnoeic at rest at admission the patient's symptoms improved gradually over the next week until the patient returned to his baseline of dyspnoea on minimal physical exertion. He again requests if there is any other treatments that can ameliorate his symptoms.

Recent investigations are summarised below.

Forced vital capacity: 115 % predicted
Forced expiratory volume (1s): 34 % predicted
FEV1 / FVC: 30 % predicted

Haemoglobin	170 g / dL
White cell count	15.8 * 10 ⁹ /l
Platelets	167 * 10 ⁹ /l
Urea	6.7 mmol / L
Creatinine	98 micromol / L
Sodium	140 mmol / L
Potassium	4.1 mmol / L
Packed cell volume	0.42

What treatment is the best choice for relief of dyspnoea in this patient?

	Morphine sulphate modified release 10 mg twice daily
	Venesection
	Diazepam 2 mg four times daily
	Temazepam 10 mg at night
	Morphine sulphate liquid preparation 20 mg four times daily

Dashboard

Overall score: 0%

1 -

□ Question 137 of 200



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Dashboard

Overall score: **0%**
1 -

□ Question 138 of 200



A 50-year-old man, presented with progressive shortness of breath and occasional dry cough of 4 weeks duration. He had underlying type 2 diabetes mellitus, hypertension and rheumatoid arthritis. He was a smoker with a smoking history of 15 pack years and a social drinker. His medications included metformin, enalapril and methotrexate which was started 6 weeks back along with folic acid supplementation.

On examination, his pulse rate was 100/min, blood pressure was 140/90 mmHg, respiratory rate was 20/min and was saturating 94% in room air. His chest revealed bibasal crackles on auscultation.

His blood counts were as follows-

Hb	150 g/l
Platelets	$150 \times 10^9/l$
WBC	$10 \times 10^9/l$
Eosinophils	$0.7 \times 10^9/sup/l$

CT chest showed patchy bilateral ground glassing with septal lines and few patchy consolidative changes.

What will be the appropriate next management?

	Cease methotrexate and start prednisolone 1mg/kg,
	Continue current treatment and add azithromycin
	Cease methotrexate and increase the dose of folic acid
	Cease methotrexate and evaluate for infections and cardiac failure
	Lung biopsy

Overall score: **0%**

1 -

□ Question 138 of 200



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	Continue current treatment and add azithromycin
	Cease methotrexate and increase the dose of folic acid
	Cease methotrexate and evaluate for infections and cardiac failure
	Lung biopsy

Overall score: **0%**

1 -

□ Question 139 of 200

□ □

A 30 year old gentleman returns from a camping holiday in the Nile Delta with nocturnal wheeziness and dry cough, weight loss, and fever. He recalls multiple mosquito bites. Chest X-ray demonstrates pulmonary infiltrates. His blood results are shown below.

Hb	14 g/dl
Platelets	$385 \times 10^9/l$
WBC	$14 \times 10^9/l$
Neutrophils	$7.5 \times 10^9/l$ (reference range $2.0-7.5 \times 10^9/l$)
Eosinophils	$1.2 \times 10^9/l$ (reference range $0.04-0.44 \times 10^9/l$)

Serum IgG	90 mg/dl (reference range 80 - 350 mg/dl)
Serum IgM	200 mg/dl (reference range 45 - 250 mg/dl)
Serum IgE	6.0 mg/dl (reference range 0.002 - 0.2 mg/dl)

Given the likely diagnosis which of the following treatments will be most effective?

	Antiretrovirals
	Tazocin
	Steroids
	Diethylcarbamazine
	Quinine

Overall score: **0%**

1 -

□ Question 139 of 200

□ □

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	Antiretrovirals
	Tazocin
	Steroids
	Diethylcarbamazine
	Quinine

Overall score: **0%**

1 -

Question 140 of 200

□ □

A 55-year-old man presents to the Emergency Department with sudden onset chest pain and associated shortness of breath. The chest pain is on the left hand side only and there is no history of cough, fever chills or recent fatigue. The patient is an ex-smoker and has a background of well-controlled chronic obstructive pulmonary disease (COPD).

On examination the patient is tachycardiac and tachypnoeic but otherwise the examination is normal.

Routine haematology and biochemistry are unremarkable but a chest x-ray shows a left sided pneumothorax which is measured to be approximately 2.5 cms.

Of the following options which represents the best management option?

	Admit the patient and observe with high flow oxygen
	Attempt aspiration using a 16-18G cannula
	Consider discharge and review the patient as an out-patient
	Insert a 8-14Fr chest drain and admit
	Intubation and ventilation

Dashboard

Overall score: 0%

1 -

□ Question 140 of 200

□ □

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	Insert a 8-14Fr chest drain and admit
	Intubation and ventilation

Dashboard

Overall score: **0%**

1 -

Question 141 of 200

□ □

A 67-year-old man presents to the emergency department with severe shortness of breath. He has a past medical history of COPD, type 2 diabetes mellitus and hypertension. On examination he appears very breathless and looks drowsy, with bilateral crackles and wheeze audible on auscultation. Following treatment with nebulisers, steroids, antibiotics and fluids he remains in type 2 respiratory failure with acidosis.

Arterial blood gas on admission:

pH	7.32
pO ₂	7.3kPa
pCO ₂	8.1kPa
HCO ₃ ⁻	25mmol/L

Arterial blood gas at two hours:

pH	7.30
pO ₂	8.2kPa
pCO ₂	9.6kPa
HCO ₃ ⁻	26mmol/L

He is started on non-invasive ventilation with a bi-level positive airway pressure. What initial settings would be most appropriate for IPAP and EPAP?

	IPAP 3cmH ₂ O and EPAP 15cmH ₂ O
	IPAP 10cmH ₂ O and EPAP 10cmH ₂ O
	IPAP 15cmH ₂ O and EPAP 3cmH ₂ O
	IPAP 20cmH ₂ O and EPAP 7cmH ₂ O

Dashboard

Overall score: **0%**

1 -

Question 141 of 200

□ □

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	IPAP 20cmH ₂ O and EPAP 7cmH ₂ O

Dashboard

Overall score: **0%**

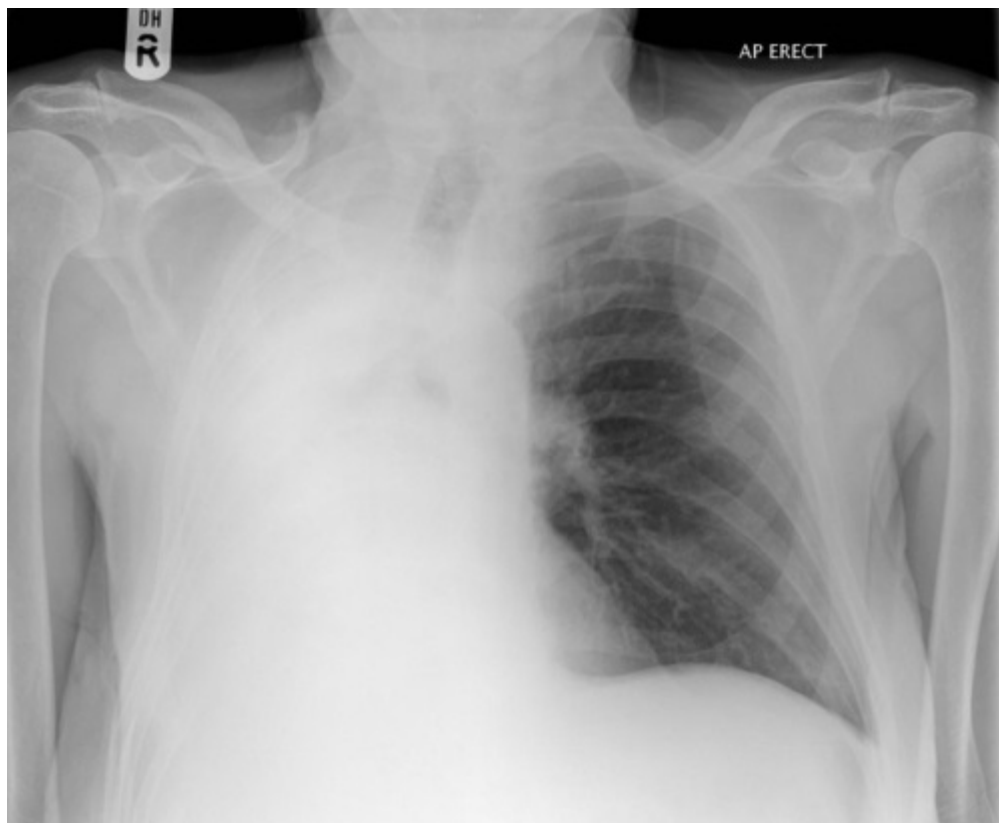
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□ Question 142 of 200

□ □

An 82-year-old man is admitted with a three day history of increasing breathlessness. His past medical history includes ischaemic heart disease and rheumatoid arthritis. His current medications include aspirin, atorvastatin, bisoprolol, ramipril and methotrexate. On examination his heart rate is 80/min, blood pressure 111/80 mmHg, respiratory rate 24/min and oxygen saturations 89% on room air. There are reduced breath sounds on the right side of his chest.

A chest x-ray is ordered:



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What is the most likely diagnosis?

	Mesothelioma
	Methotrexate-induced pneumonitis
	Multilobar pneumonia
	Massive pleural effusion
	Lung collapse

Dashboard

Overall score: 0%

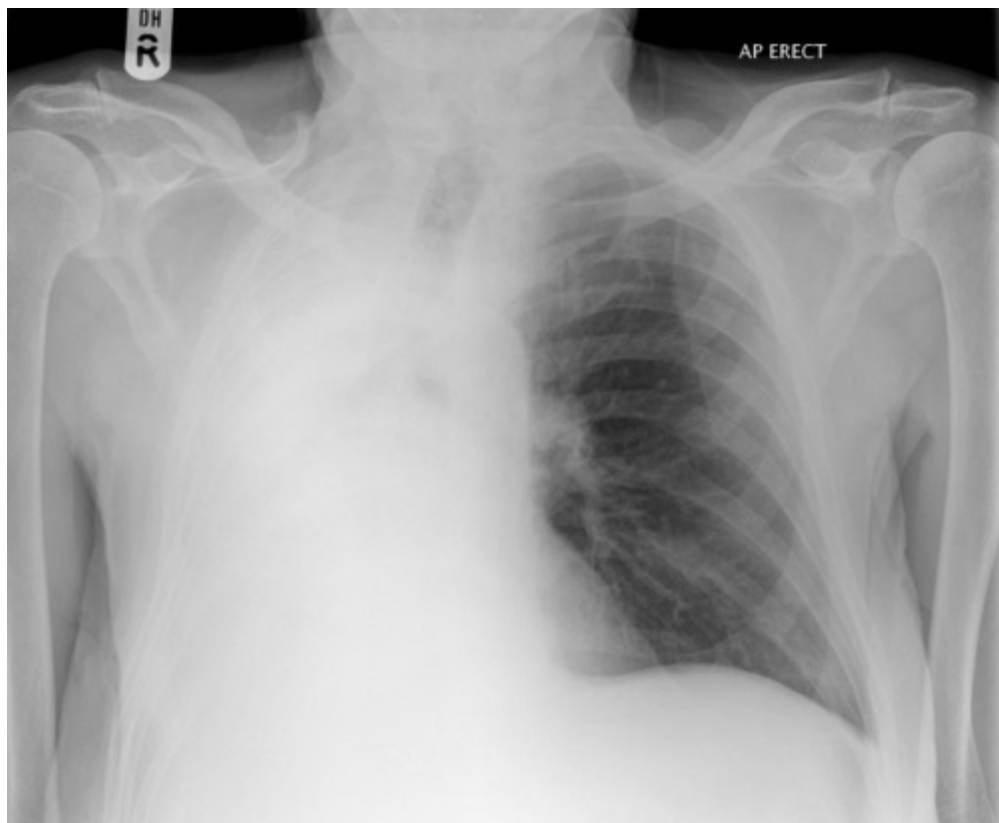
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□ Question 142 of 200

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Dashboard

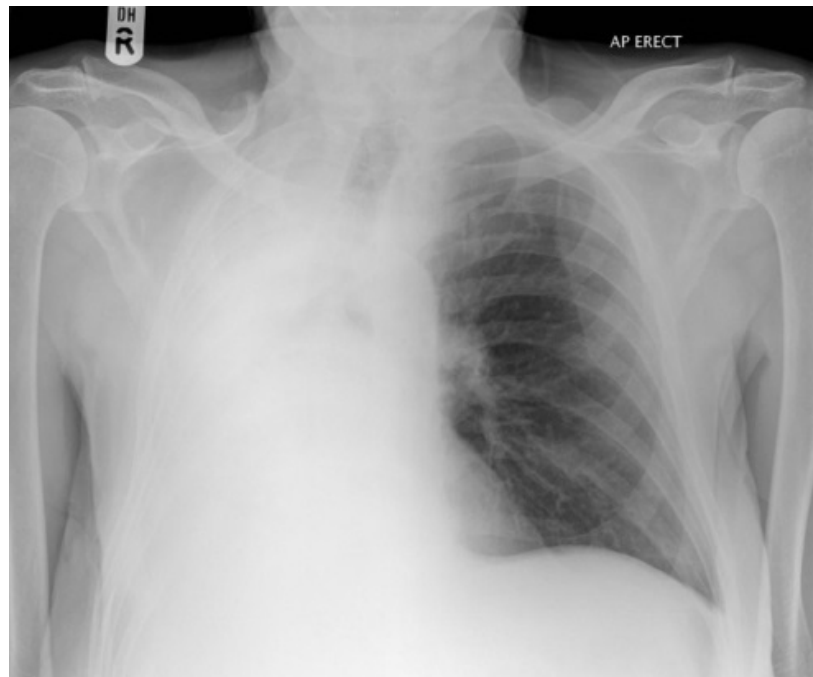
Overall score: **0%**
1 -

□ Question 142 of 200

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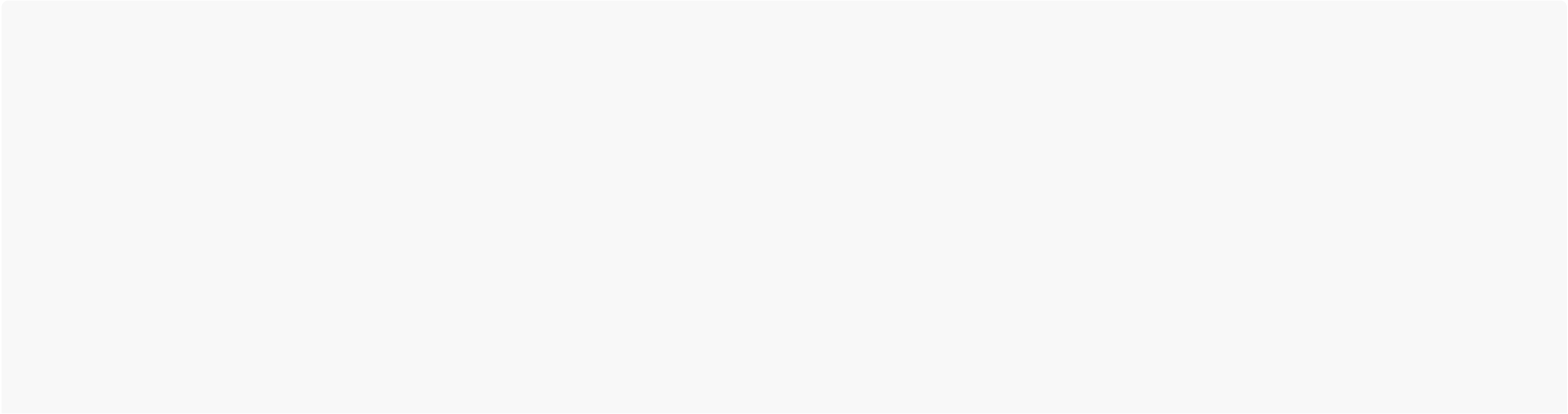


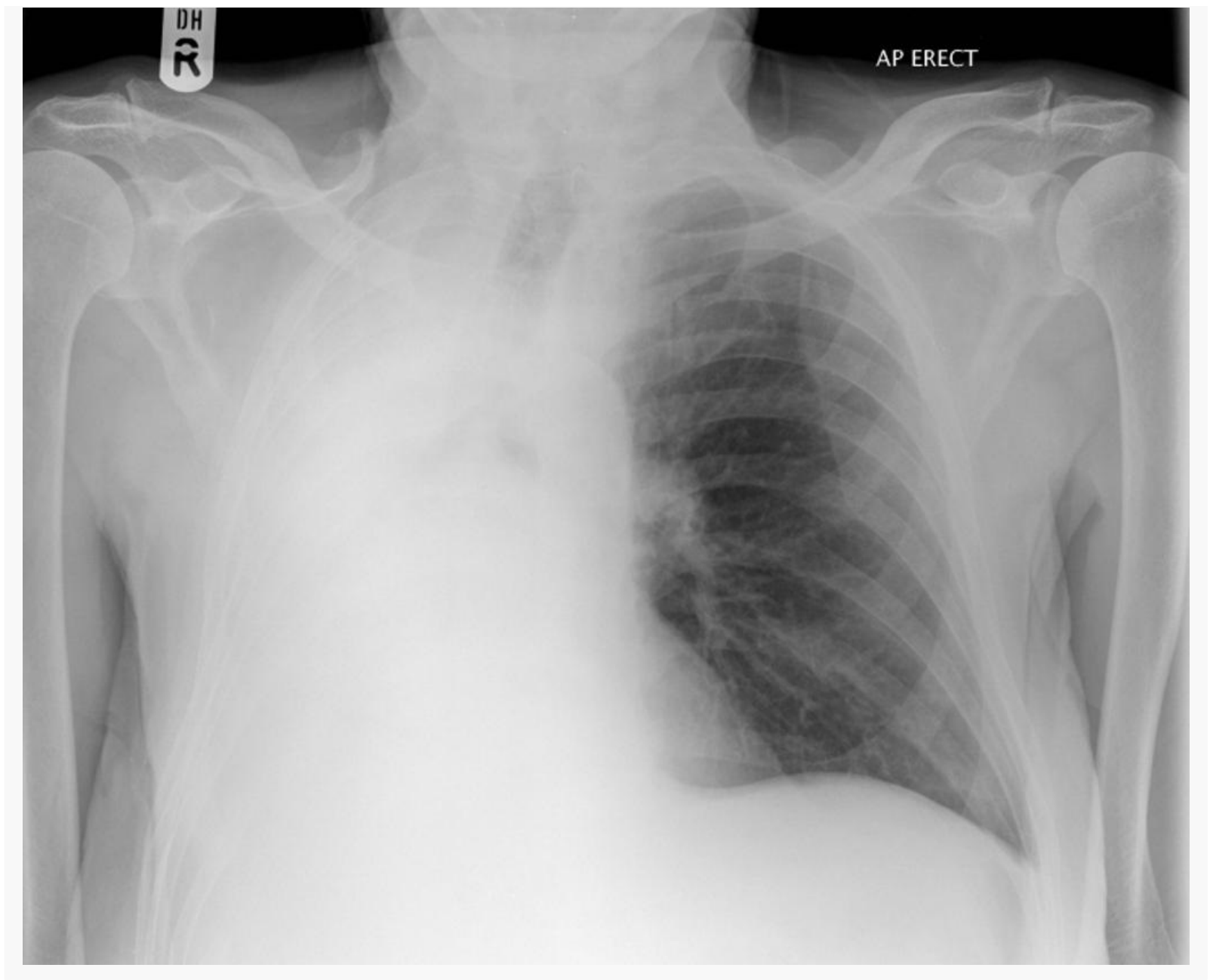
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Dashboard

Overall score: **0%**
1 -



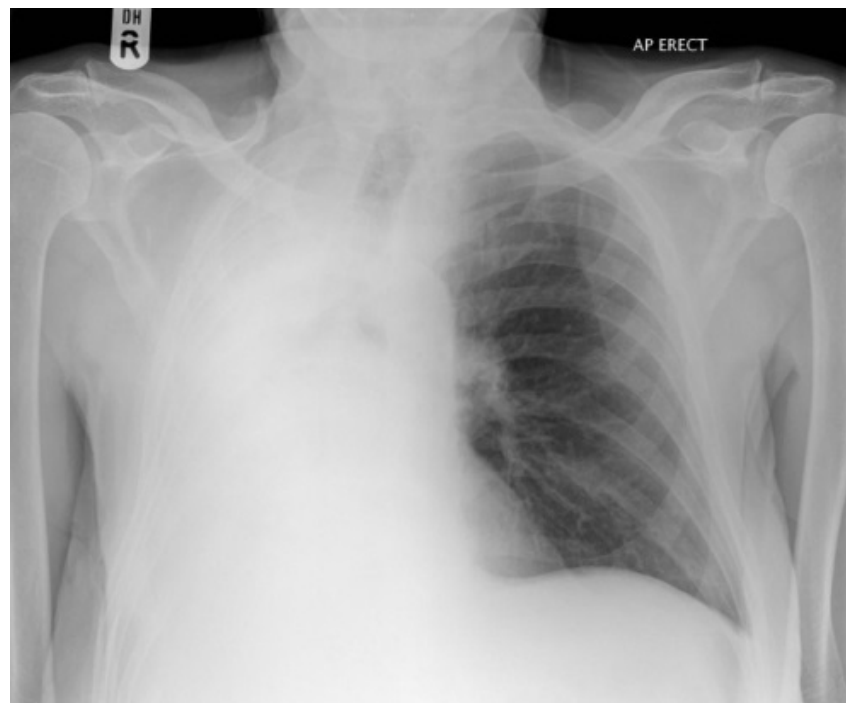


□ Question 142 of 200

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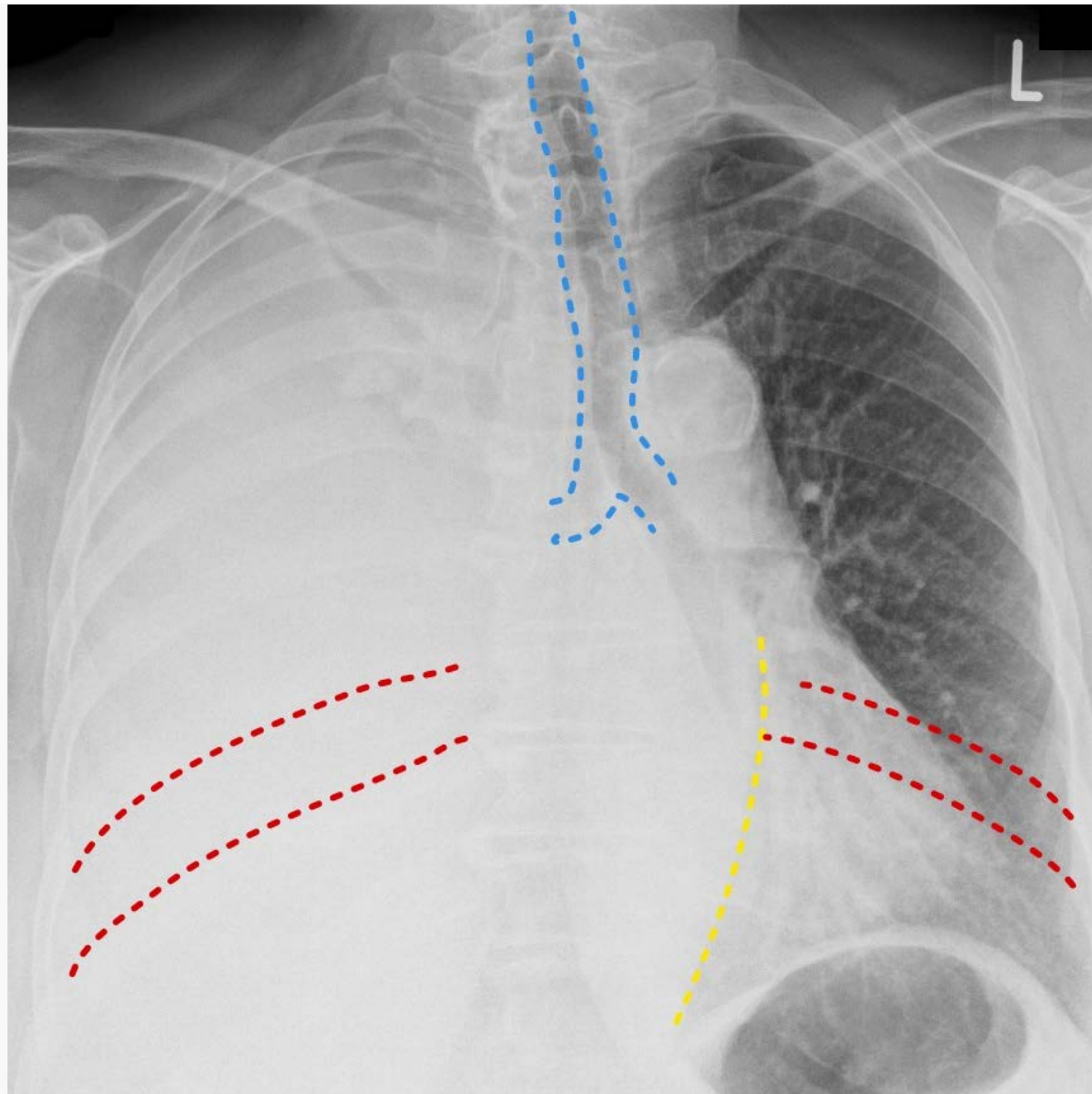
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	Methotrexate-induced pneumonitis
	Multilobar pneumonia
	Massive pleural effusion
	Lung collapse

Dashboard

Overall score: **0%**

1 -



Question 143 of 200

□ □

A 50-year-old man presents to his GP complaining of daytime somnolence. He reports that yesterday he fell asleep while stopped at a red light. His wife adds that he is a habitual snorer, and sometimes seems to stop breathing for seconds at a time while sleeping. His past medical history is significant for hypertension, a 25 pack-year smoking history, and a two beer per day drinking habit.

Physical examination reveals an obese, middle-aged man in no apparent distress. His pulse is 88/min, blood pressure is 160/100 mmHg, and respirations are 14/min. The remainder of the physical examination, including chest auscultation, is within normal limits.

Which of the following is the most appropriate next step in the management of this patient?

	Prescribe methylphenidate
	Pulmonary function testing
	MRI of the upper airways
	Nocturnal polysomnography
	Dexamethasone suppression test

Dashboard

Overall score: 0%

1 -

Question 143 of 200

□ □

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Dashboard

Overall score: **0%**

1 -

□ Question 144 of 200

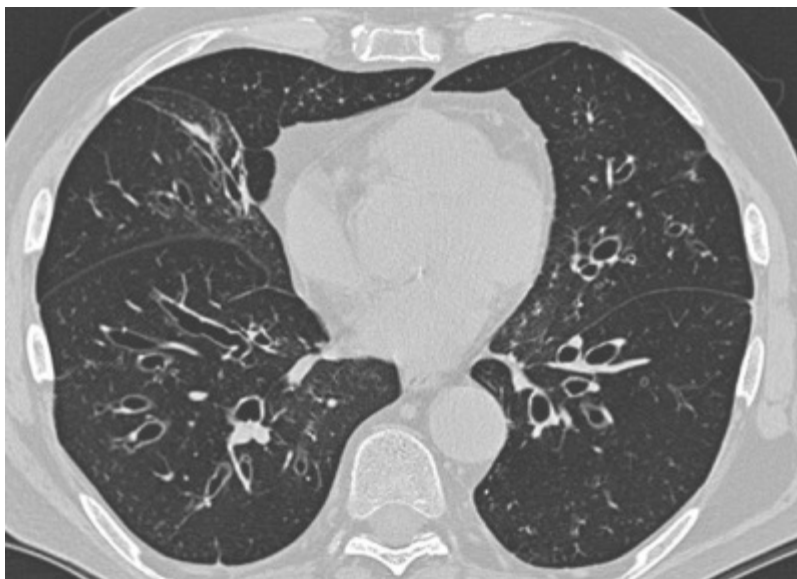
□ □

A 45-year-old man is referred to the respiratory department due to increasing shortness-of-breath and frequent chest infections. He is a smoker (20 cigarettes/day). When he was a child he used a salbutamol inhaler but stopped this around the age of 6-7 years. He also had whooping cough as a child. Pulmonary function tests performed by his GP show the following:

FEV1	3.6 L (predicted 3.8 L)
FVC	4.3 L (predicted 4.5 L)
FEV1/FVC	84% (normal > 75%)

On auscultation of his chest scattered crepitations are noted. His oxygen saturations are 96% on room air.

A CT chest is requested:



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What is the most likely diagnosis?

	Lung cancer
	Previous <i>Bordetella pertussis</i> infection
	Emphysema
	Kartagener's syndrome
	Cystic fibrosis

Dashboard

Overall score: **0%**

1 -

□ Question 144 of 200



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Dashboard

Overall score: **0%**

1 -

□ Question 144 of 200

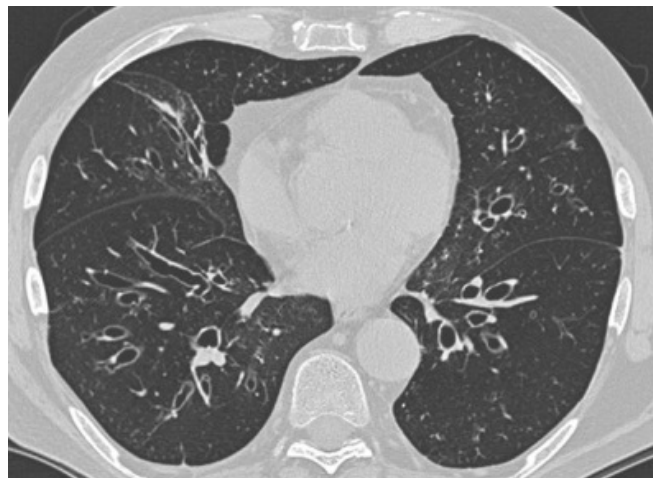
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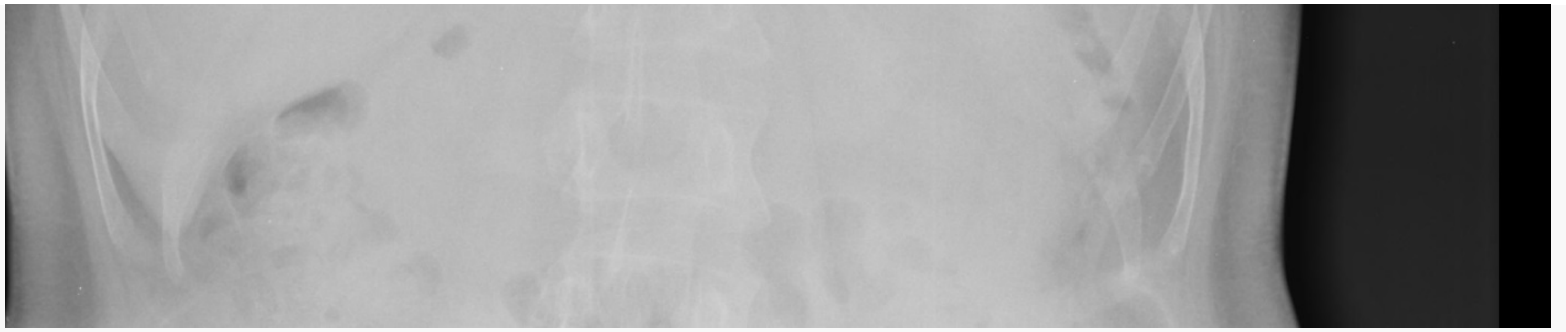
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Dashboard

Overall score: **0%**

1 -





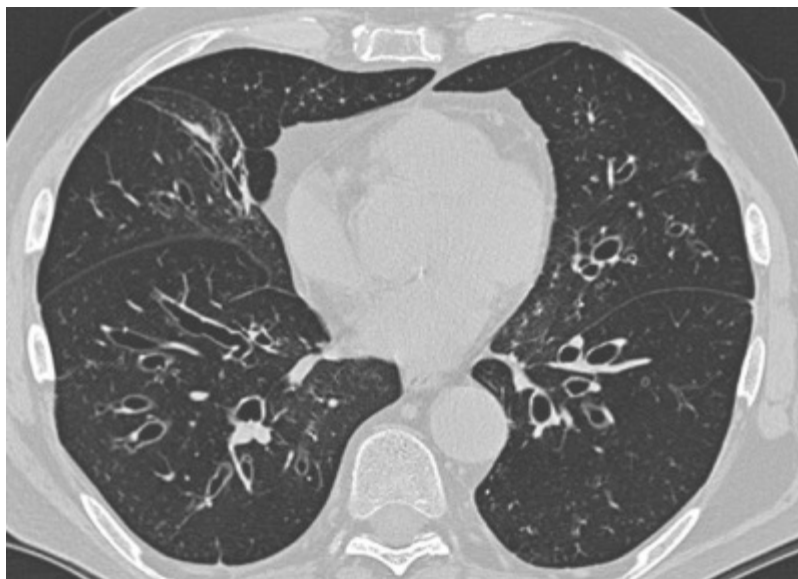
Question 144 of 200

A 45-year-old man is referred to the respiratory department with a long history of recurrent respiratory infections. He is a smoker (20 cigarettes/day). When he was a child, he had whooping cough around the age of 6-7 years. He also had whooping cough as an adult. He also has the following:

FEV1	3.6 L (predicted 3.8 L)
FVC	4.3 L (predicted 4.5 L)
FEV1/FVC	84% (normal > 75%)

On auscultation of his chest scattered crepitations are heard throughout both lungs.

A CT chest is requested:



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What is the most likely diagnosis?

	Lung cancer
	Previous <i>Bordetella pertussis</i> infection
	Emphysema
	Kartagener's syndrome
	Cystic fibrosis

Dashboard

Overall score: **0%**

1 -

□ Question 145 of 200

□ □

A 69-year-old woman presents to the Emergency Department with a one month history of gradually worsening breathlessness. She is generally fit and well but last year was diagnosed with chronic obstructive pulmonary disease (COPD) after a 50-pack-year history of smoking. Around 10 years ago she retired from the local car production plant. On examination she is breathless at rest with a respiratory rate of 18/min and oxygen saturations of 93% on room air.

A chest x-ray is performed:



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What is the most likely diagnosis?

	Pneumonectomy
	Mesothelioma
	Lung collapse
	Massive pleural effusion
	Ewing sarcoma

Dashboard

Overall score: 0%

1 -

□ Question 145 of 200

□ □

A 69-year-old woman presents to the Emergency Department with a one month history of gradually worsening breathlessness. She is generally fit and well but last year was diagnosed with chronic obstructive pulmonary disease (COPD) after a 50-pack-year history of smoking. Around 10 years ago she retired from the local car production plant. On examination she is breathless at rest with a respiratory rate of 18/min and oxygen saturations of 93% on room air.

A chest x-ray is performed:



© Image used on license from Radiopaedia

What is the most likely diagnosis?

	Pneumonectomy
	Mesothelioma
	Lung collapse
	Massive pleural effusion
	Ewing sarcoma

Dashboard

Overall score: **0%**

1 -

□ Question 145 of 200

□ □

A 69-year-old woman presents to the Emergency Department with a one month history of gradually worsening breathlessness. She is generally fit and well but last year was diagnosed with chronic obstructive pulmonary disease (COPD) after a 50-pack-year history of smoking. Around 10 years ago she retired from the local car production plant. On examination she is breathless at rest with a respiratory rate of 18/min and oxygen saturations of 93% on room air.

A chest x-ray is performed:



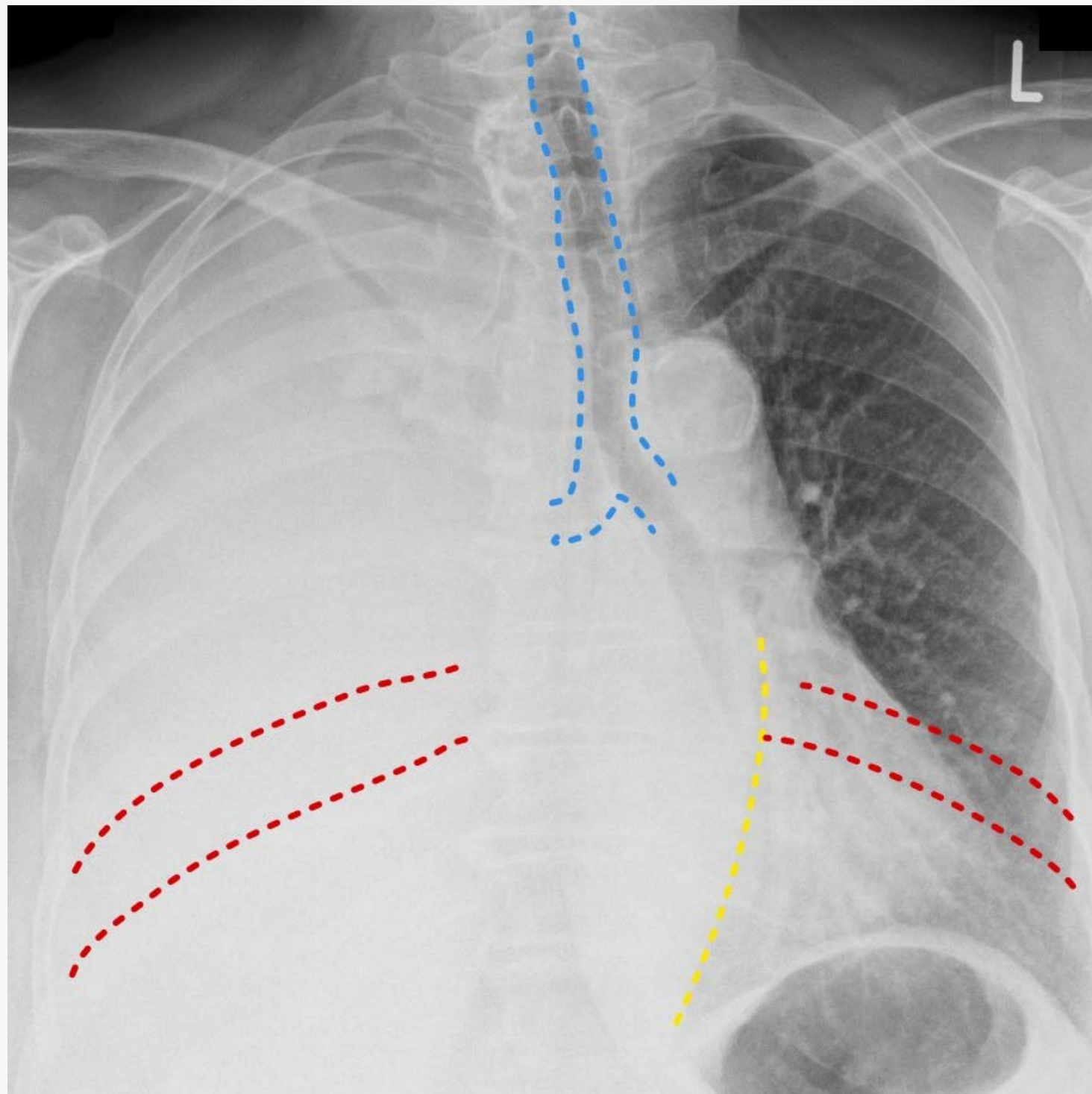
© Image used on license from Radiopaedia

What is the most likely diagnosis?

	Pneumectomy
	Mesothelioma
	Lung collapse
	Massive pleural effusion
	Ewing sarcoma

Dashboard

Overall score: 0%



□ Question 145 of 200

□ □

A 69-year-old woman presents to the Emergency Department with a one month history of gradually worsening breathlessness. She is generally fit and well but last year was diagnosed with chronic obstructive pulmonary disease (COPD) after a 50-pack-year history of smoking. Around 10 years ago she retired from the local car production plant. On examination she is breathless at rest with a respiratory rate of 18/min and oxygen saturations of 93% on room air.

A chest x-ray is performed:



© Image used on license from Radiopaedia

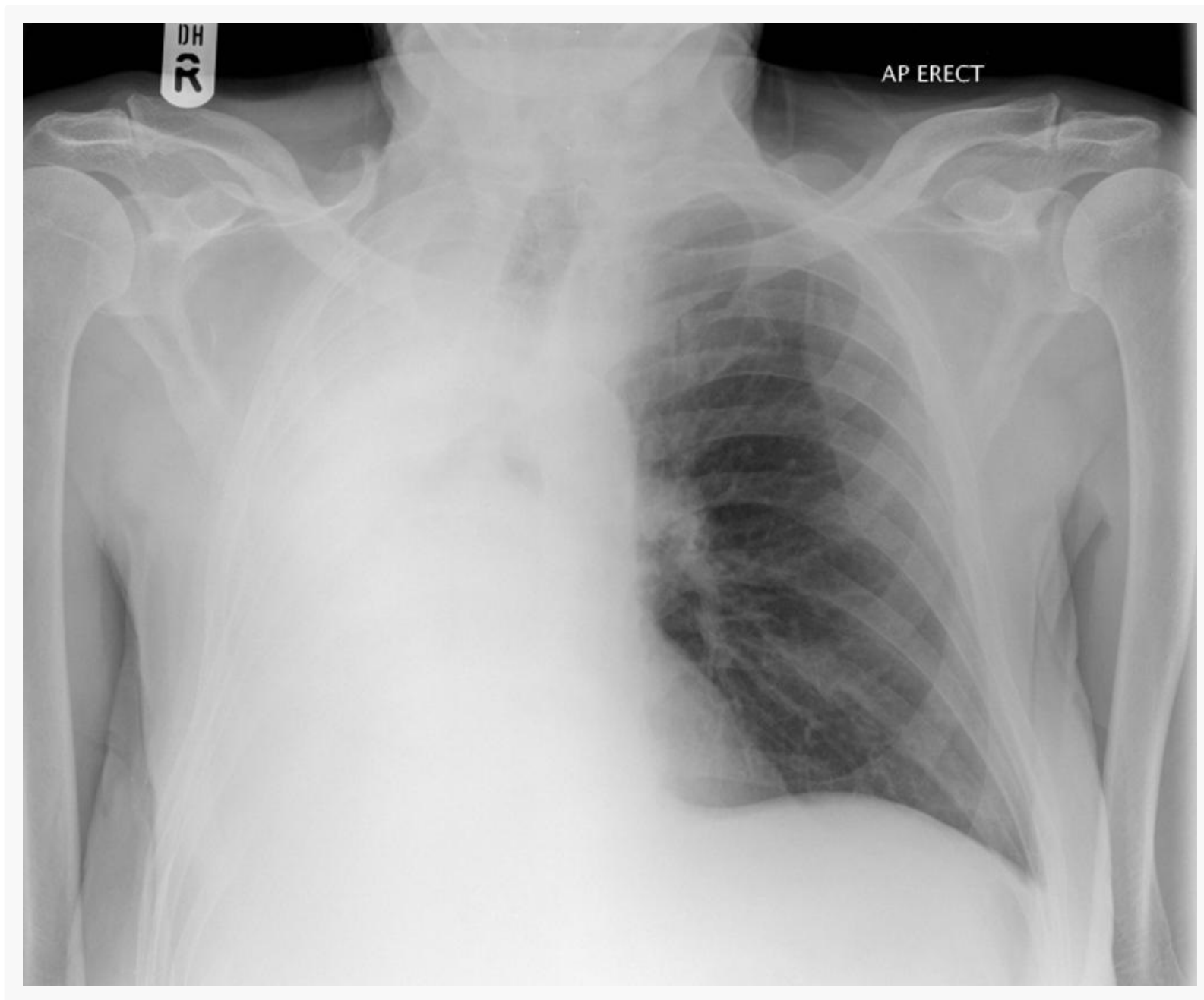
What is the most likely diagnosis?

	Pneumonectomy
	Mesothelioma
	Lung collapse
	Massive pleural effusion
	Ewing sarcoma

Dashboard

Overall score: 0%

1 -



□ Question 145 of 200

□ □

A 69-year-old woman presents to the Emergency Department with a one month history of gradually worsening breathlessness. She is generally fit and well but last year was diagnosed with chronic obstructive pulmonary disease (COPD) after a 50-pack-year history of smoking. Around 10 years ago she retired from the local car production plant. On examination she is breathless at rest with a respiratory rate of 18/min and oxygen saturations of 93% on room air.

A chest x-ray is performed:



© Image used on license from Radiopaedia

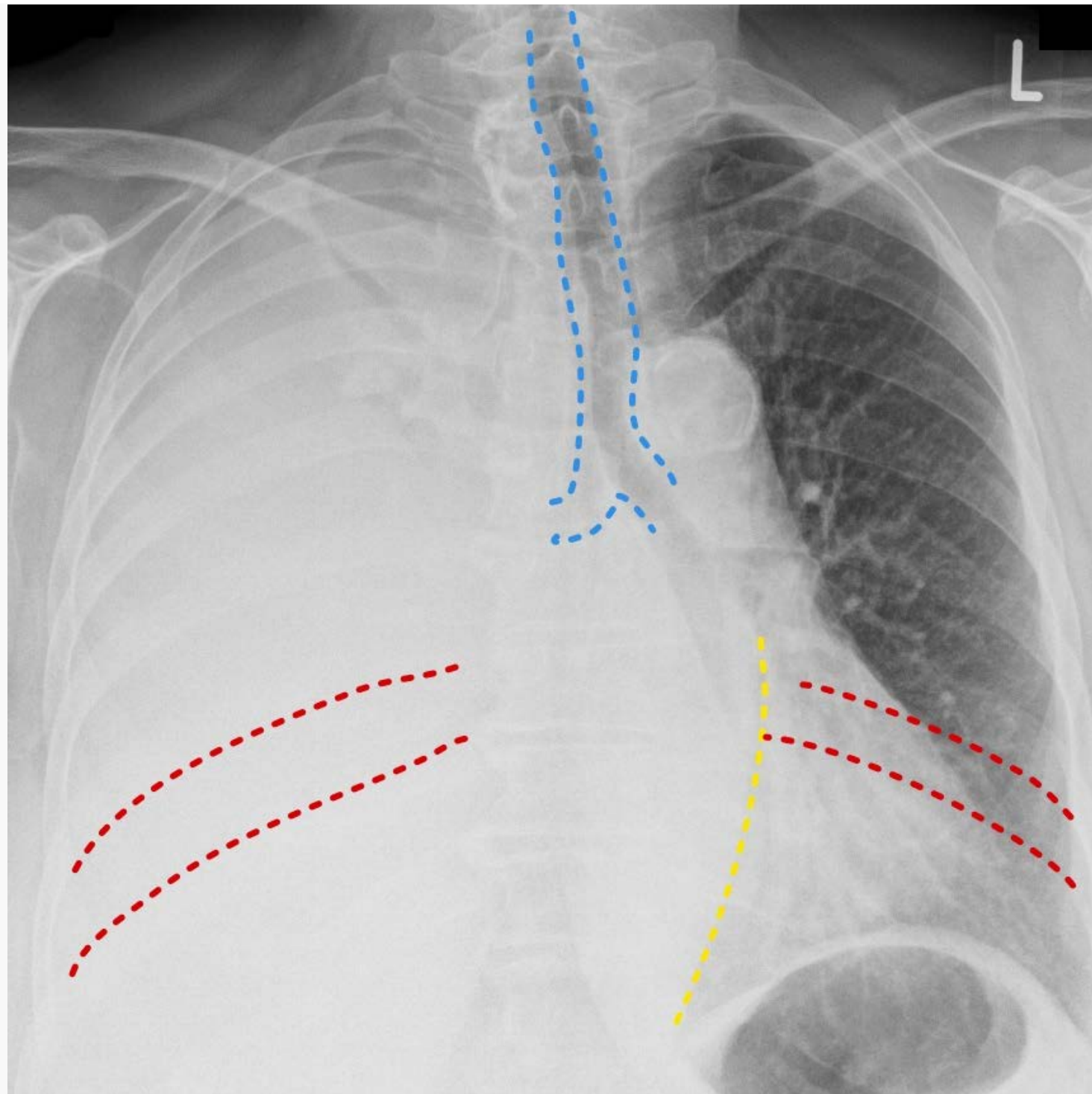


What is the most likely diagnosis?

	Pneumectomy
	Mesothelioma
	Lung collapse
	Massive pleural effusion
	Ewing sarcoma

Dashboard

Overall score: 0%



Question 146 of 200

□ □

A 27-year-old non smoker Chinese lady presents to the emergency department with sudden onset left pleuritic chest pain and shortness of breath. She explains that she has suffered from gradual deterioration in her exercise tolerance over the last year.

Chest x-ray demonstrated a large pneumothorax that is aspirated successfully. Repeat chest x-ray shows resolution of the pneumothorax but reticulonodular changes in the bases bilaterally.

CT chest: cystic changes in the lung bases with a minimal left sided pleural effusion.

What is the most likely diagnosis?

	Neurofibromatosis
	Alveolar proteinosis
	Langerhans cell histiocytosis
	Lymphangioliomyomatosis
	Hermansky Pudlak Syndrome

Dashboard

Overall score: 0%

1 -

Question 146 of 200

□ □

A 27-year-old non smoker Chinese lady presents to the emergency department with sudden onset left pleuritic chest pain and shortness of breath. She explains that she has suffered from gradual deterioration in her exercise tolerance over the last year.

Chest x-ray demonstrated a large pneumothorax that is aspirated successfully. Repeat chest x-ray shows resolution of the pneumothorax but reticulonodular changes in the bases bilaterally.

CT chest: cystic changes in the lung bases with a minimal left sided pleural effusion.

What is the most likely diagnosis?

	Neurofibromatosis
	Alveolar proteinosis
	Langerhans cell histiocytosis
	Lymphangioliomyomatosis
	Hermansky Pudlak Syndrome

Dashboard

Overall score: **0%**

1 -

Question 147 of 200

□ □

A 52-year-old man presents with a 5 day history of cough, feeling hot and facial pains. He is generally fit and well although does currently take sertraline for anxiety and depression. He describes a cough productive of pale yellow sputum. He also describes difficulty breathing through his nose and pain in his face, particularly when coughing on leaning forward.

On examination he is alert, pulse rate is 84/min, temperature is 37.3° and respiratory rate is 16/min. His blood pressure is 122/74 mmHg. Chest auscultation is unremarkable. He is tender over the maxilla.

What is the most appropriate next step in management?

	Check serum urea for CURB-65 scoring
	Oral amoxicillin + review in 3-4 days if not improving
	Advise paracetamol for symptoms + review in 3-4 days if not improving
	Arrange a chest x-ray
	Oral clarithromycin + review in 3-4 days if not improving

Dashboard

Overall score: 0%

1 -

Question 147 of 200

□ □

A 52-year-old man presents with a 5 day history of cough, feeling hot and facial pains. He is generally fit and well although does currently take sertraline for anxiety and depression. He describes a cough productive of pale yellow sputum. He also describes difficulty breathing through his nose and pain in his face, particularly when coughing on leaning forward.

On examination he is alert, pulse rate is 84/min, temperature is 37.3° and respiratory rate is 16/min. His blood pressure is 122/74 mmHg. Chest auscultation is unremarkable. He is tender over the maxilla.

What is the most appropriate next step in management?

	Check serum urea for CURB-65 scoring
	Oral amoxicillin + review in 3-4 days if not improving
	Advise paracetamol for symptoms + review in 3-4 days if not improving
	Arrange a chest x-ray
	Oral clarithromycin + review in 3-4 days if not improving

Dashboard

Overall score: **0%**

1 -

Question 148 of 200

A 23-year-old gentleman presents with severe shortness of breath and tight-chestedness. On examination, he is very wheezy, his respiratory rate is high but he is speaking in full sentences. He is a known to have asthma and was out in a storm when he suddenly noticed shortness of breath, wheezing and felt his chest becoming tight. His asthma is normally well controlled only occasionally requiring the use of a salbutamol inhaler. He is thought to have thunderstorm asthma. What is the aetiological cause?

<input type="checkbox"/>	Increase in cold causing exacerbation
<input type="checkbox"/>	Electrical charge causing irritation
<input type="checkbox"/>	Sudden spore and pollen release due to pressure changes
<input type="checkbox"/>	Increase in winds causing exacerbation
<input type="checkbox"/>	Anxiety triggering asthma attack

Dashboard

Overall score: 0%

1 -

Question 148 of 200

□ □

A 23-year-old gentleman presents with severe shortness of breath and tight-chestedness. On examination, he is very wheezy, his respiratory rate is high but he is speaking in full sentences. He is a known to have asthma and was out in a storm when he suddenly noticed shortness of breath, wheezing and felt his chest becoming tight. His asthma is normally well controlled only occasionally requiring the use of a salbutamol inhaler. He is thought to have thunderstorm asthma. What is the aetiological cause?

	Increase in cold causing exacerbation
	Electrical charge causing irritation
	Sudden spore and pollen release due to pressure changes
	Increase in winds causing exacerbation
	Anxiety triggering asthma attack

Dashboard

Overall score: **0%**

1 -

Question 149 of 200

□ □

A 32-year-old taxi driver attends the emergency department with pleuritic right-sided chest pain. He is a current smoker of 15 cigarettes/day. He reports feeling unwell for 10 days with a cough and fever. The chest pain started gradually over the last 2 days becoming slowly more severe. A chest x-ray shows right sided consolidation and an effusion. He is commenced on penicillin antibiotics. Pleural aspirate under ultrasound guidance shows a simple effusion and the following results:

Appearance	Serous
pH	7.30
Protein	46 g/l
LDH	400 IU/l
Glucose	3.7mmol/l
Gram stain	No organisms or malignant cells seen
Culture	No growth

What is the next best step?

	Intercostal drain
	Continue antibiotics and observe
	CT thorax with contrast
	Repeat pleural aspirate in 24 hours
	Further investigation with bronchoscopy

Overall score: **0%**

1 -

Question 149 of 200

□ □

A 32-year-old taxi driver attends the emergency department with pleuritic right-sided chest pain. He is a current smoker of 15 cigarettes/day. He reports feeling unwell for 10 days with a cough and fever. The chest pain started gradually over the last 2 days becoming slowly more severe. A chest x-ray shows right sided consolidation and an effusion. He is commenced on penicillin antibiotics. Pleural aspirate under ultrasound guidance shows a simple effusion and the following results:

Appearance	Serous
pH	7.30
Protein	46 g/l
LDH	400 IU/l
Glucose	3.7mmol/l
Gram stain	No organisms or malignant cells seen
Culture	No growth

What is the next best step?

	Intercostal drain
	Continue antibiotics and observe
	CT thorax with contrast
	Repeat pleural aspirate in 24 hours
	Further investigation with bronchoscopy

Overall score: **0%**

1 -

Question 150 of 200

□ □

A 32-year-old businessman presented with a 1-week history of a productive cough of yellow sputum, mild wheeze, and mild dyspnoea. He has a 2 pack year history of smoking but has been otherwise well. On examination, his blood pressure is 120/90 mmHg, heart rate is 80 beats/minute, oxygen saturation 98% on room air. On auscultation, there is a mild wheeze but his chest is otherwise clear.

Hb	140 g/l
Platelets	$350 \times 10^9/l$
WBC	$13 \times 10^9/l$

Chest x-ray is clear.

How should he be managed?

	Amoxicillin
	Amoxicillin with clavulanic acid
	Amoxicillin and doxycycline
	Cough medicine and adequate hydration
	Adequate hydration

Dashboard

Overall score: 0%

1 -

Question 150 of 200

□ □

A 32-year-old businessman presented with a 1-week history of a productive cough of yellow sputum, mild wheeze, and mild dyspnoea. He has a 2 pack year history of smoking but has been otherwise well. On examination, his blood pressure is 120/90 mmHg, heart rate is 80 beats/minute, oxygen saturation 98% on room air. On auscultation, there is a mild wheeze but his chest is otherwise clear.

Hb	140 g/l
Platelets	$350 \times 10^9/l$
WBC	$13 \times 10^9/l$

Chest x-ray is clear.

How should he be managed?

	Amoxicillin
	Amoxicillin with clavulanic acid
	Amoxicillin and doxycycline
	Cough medicine and adequate hydration
	Adequate hydration

Dashboard

Overall score: **0%**

1 -

Question 151 of 200

□ □

A 25-year-old man presents to the emergency department complaining of breathlessness and pleuritic chest pain, which started suddenly 12 hours ago. He has no relevant past medical history, and is a non-smoker. His chest x-ray shows a pneumothorax with a 2cm rim. What is the correct management in this situation?

	Oxygen therapy to maintain saturations >95%
	Chest drain
	Aspiration
	Discharge with an outpatient review in 2 weeks
	Admit for observation

Dashboard

Overall score: 0%

1 -

□ Question 151 of 200

□ □

A 25-year-old man presents to the emergency department complaining of breathlessness and pleuritic chest pain, which started suddenly 12 hours ago. He has no relevant past medical history, and is a non-smoker. His chest x-ray shows a pneumothorax with a 2cm rim. What is the correct management in this situation?

	Oxygen therapy to maintain saturations >95%
	Chest drain
	Aspiration
	Discharge with an outpatient review in 2 weeks
	Admit for observation

Dashboard

Overall score: **0%**

1 -

□ Question 152 of 200

□ □

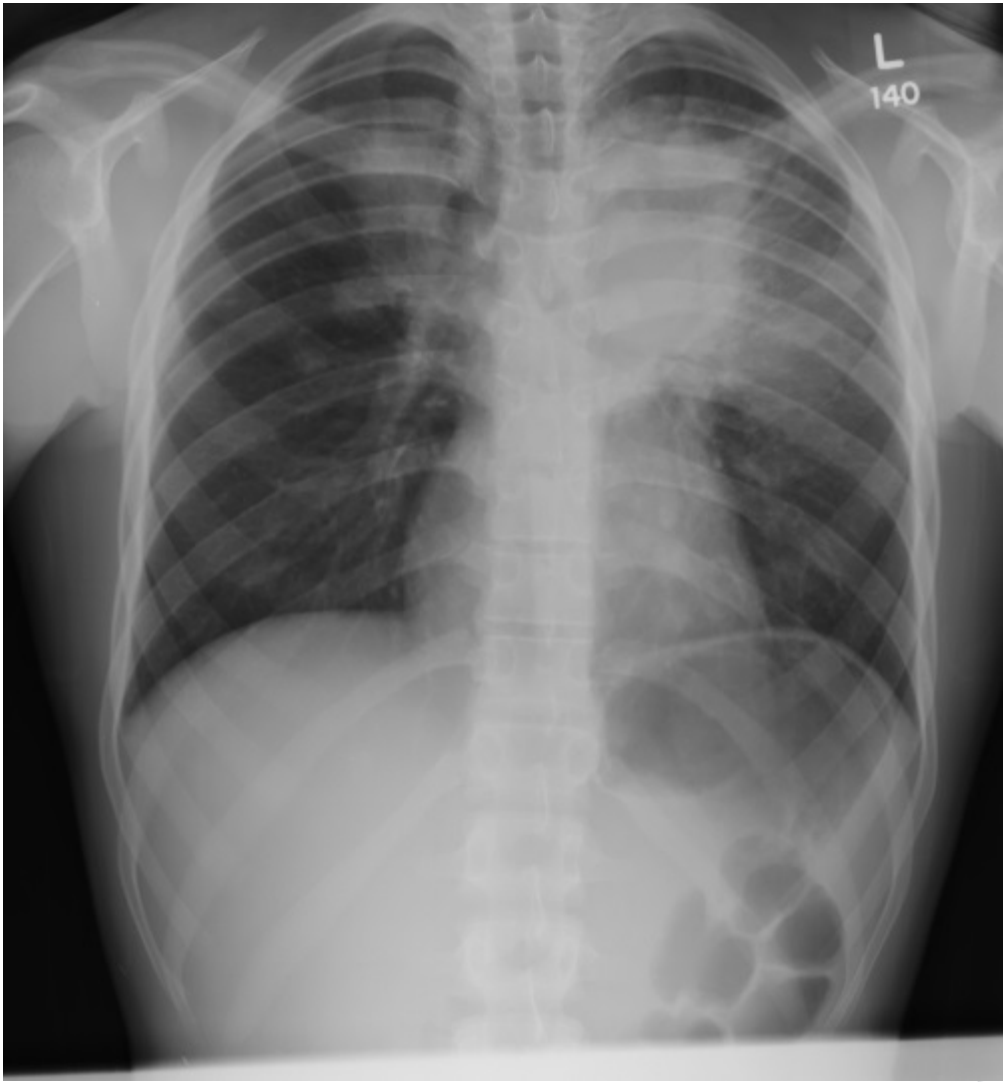
A 23-year-old man presents with dyspnoea and haemoptysis to the Emergency Department. He initially thought his symptoms were due to a chest infection but a course of amoxicillin from his GP has not helped. He now feels short of breath on mild exertion and has coughed up fresh blood on a number of occasions today.

On examination his oxygen saturations are 92% on air. On examination he has crackles predominately in the upper and lower zones of the left lung. Temperature is 37.7°C.

Hb	13.1 g/dL
WCC	11.3 *10 ⁹ /l
Sodium	137 mmol/l
Potassium	4.2 mmol/l
Urea	6.4 mmol/l
Creatinine	123 µmol/l
CRP	188 mg/L

Urine dip: blood +++, leucocytes +

A chest x-ray is requested:



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Later tests during his admission show the following;

c-ANCA	Positive
p-ANCA	Positive
Anti-GBM	Negative

What is the most likely diagnosis?

	Granulomatosis with polyangiitis
	Cryptogenic organizing pneumonia
	Churg-Strauss syndrome
	Tuberculosis
	Goodpasture's disease

Dashboard

Overall score: **0%**

1 -

□ Question 152 of 200

□ □

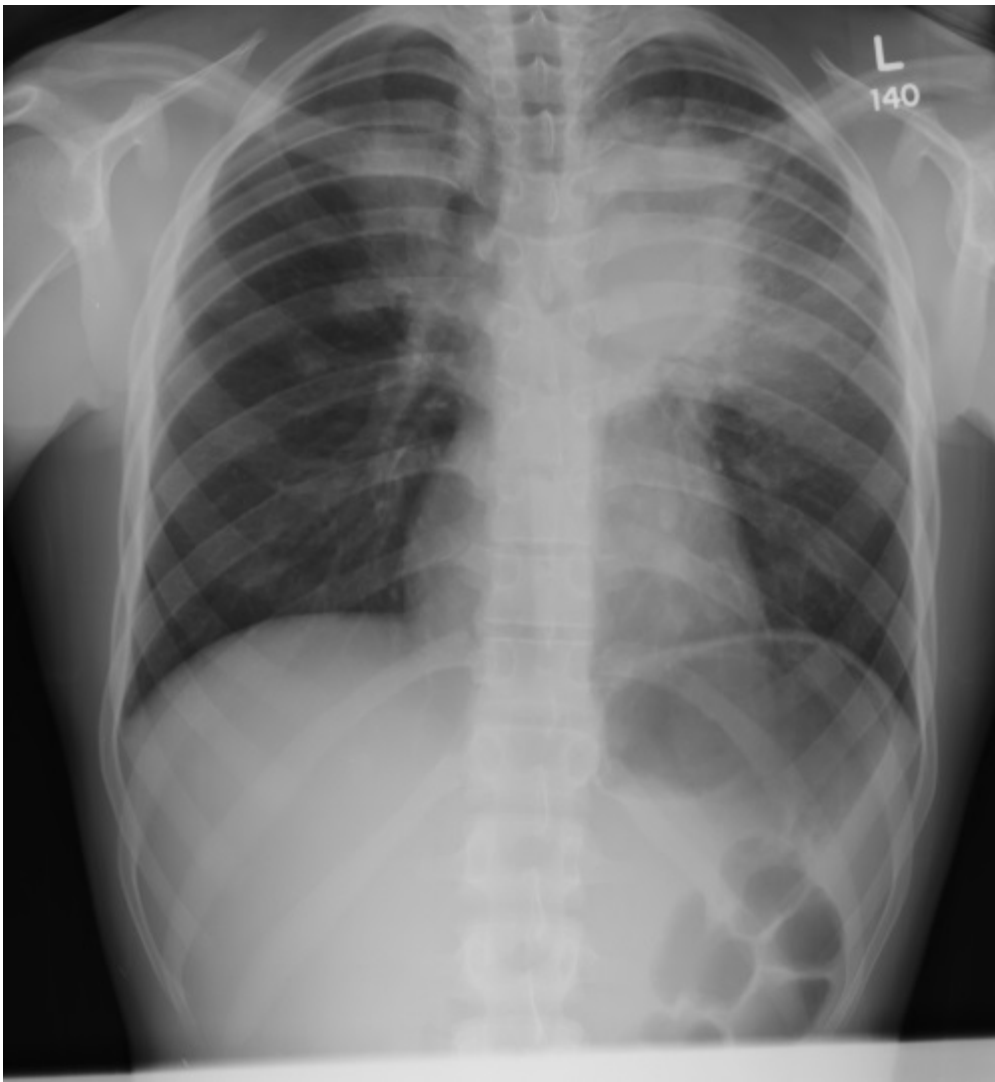
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On examination his oxygen saturations are 92% on air. On examination he has crackles predominately in the upper and lower zones of the left lung. Temperature is 37.7°C.

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Creatinine	123 µmol/l
CRP	188 mg/L

Urine dip: blood +++, leucocytes +

A chest x-ray is requested:



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Later tests during his admission show the following;

c-ANCA	Positive
p-ANCA	Positive
Anti-GBM	Negative

What is the most likely diagnosis?

	Granulomatosis with polyangiitis
	Cryptogenic organizing pneumonia
	Churg-Strauss syndrome
	Tuberculosis
	Goodpasture's disease

Dashboard

Overall score: **0%**

1 -

Question 152 of 200

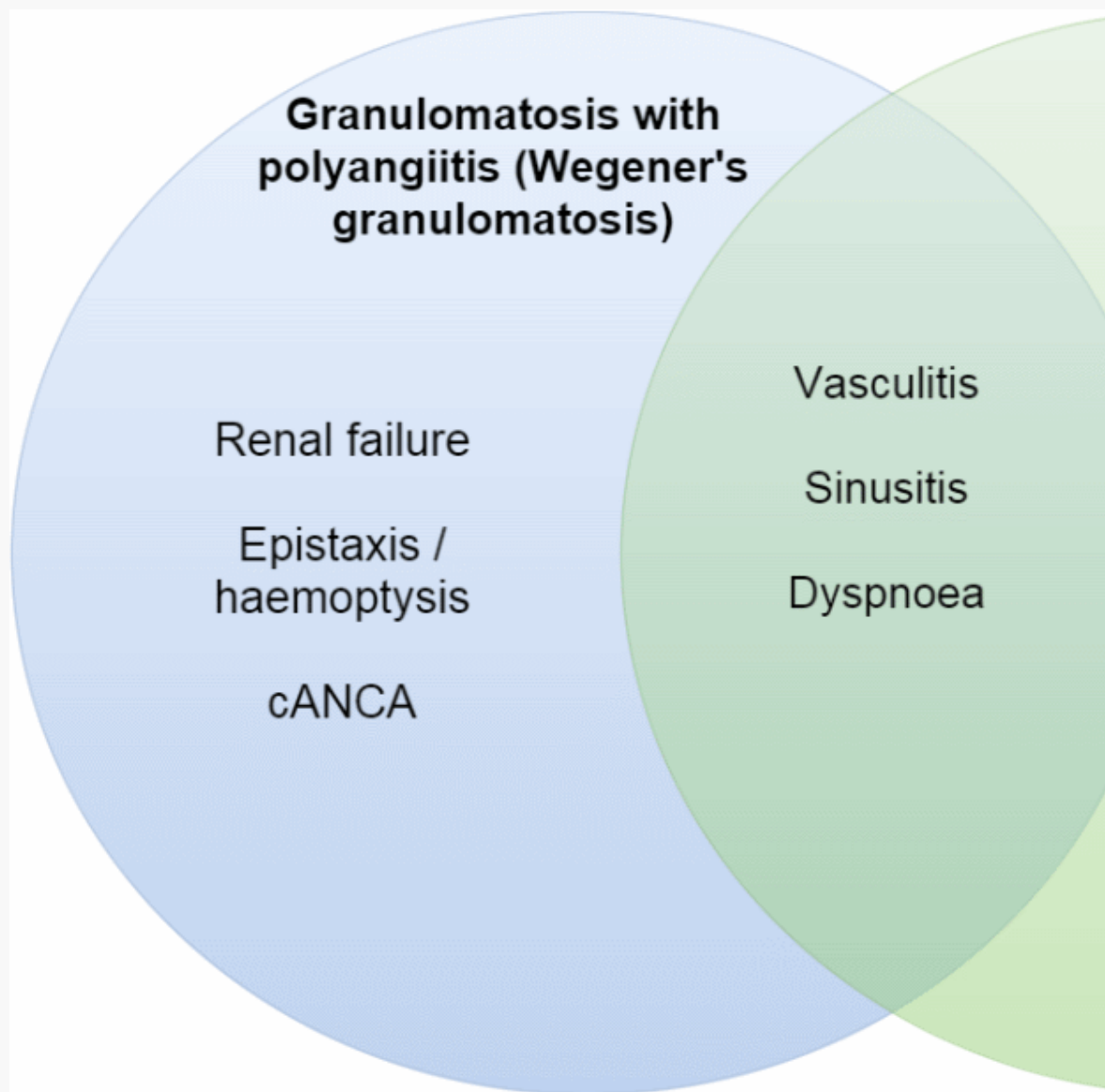
A 23-year-old man presents with symptoms were due to a chest infection. He has shortness of breath on mild exertion and a dry cough.

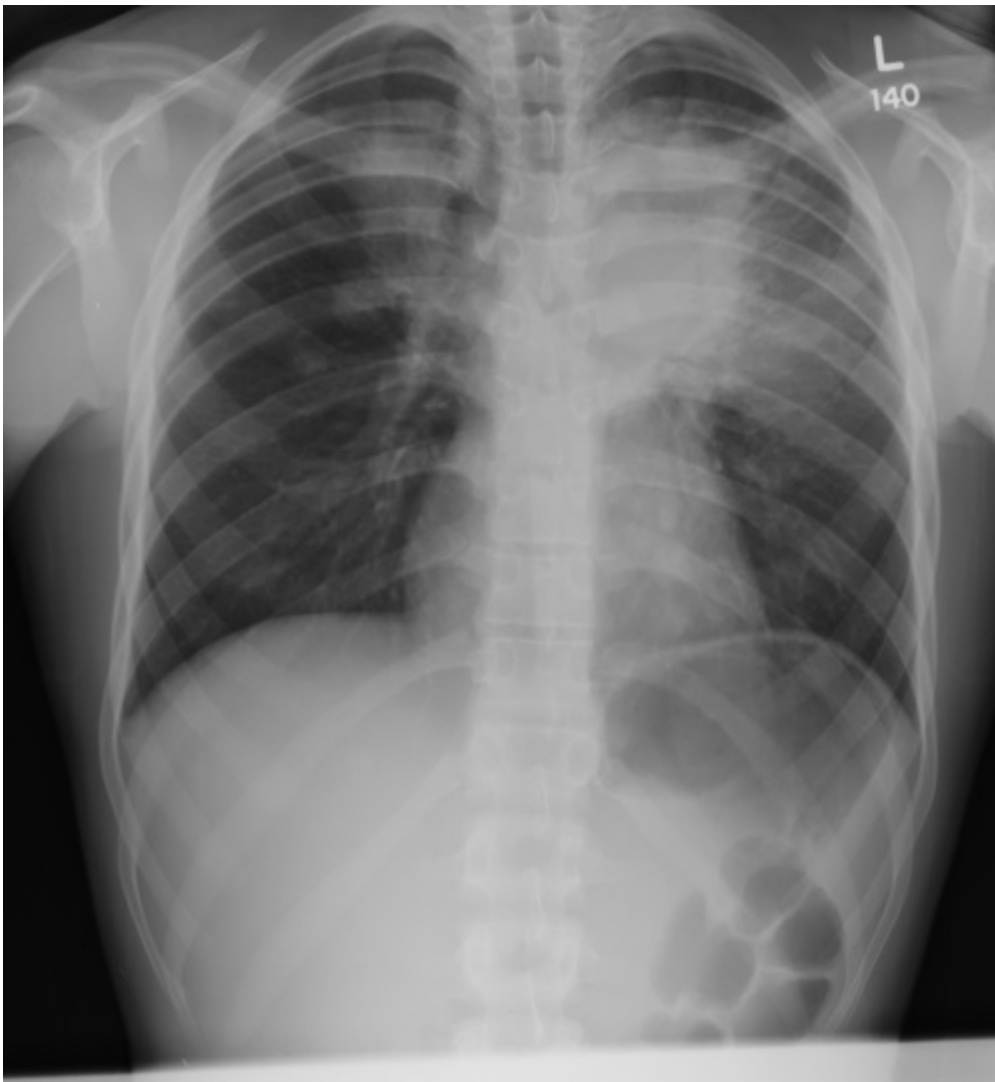
On examination his oxygen saturation is 92% on room air. There are crackles in the lower zones of the left lung.

Hb	13.1 g/dL
WCC	$11.3 \times 10^9/L$
Sodium	137 mmol/L
Potassium	4.2 mmol/L
Urea	6.4 mmol/L
Creatinine	123 $\mu\text{mol/L}$
CRP	188 mg/L

Urine dip: blood +++, leucocytes +

A chest x-ray is requested:





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Later tests during his admission show the following;

c-ANCA	Positive
p-ANCA	Positive
Anti-GBM	Negative

What is the most likely diagnosis?

	Granulomatosis with polyangiitis
	Cryptogenic organizing pneumonia
	Churg-Strauss syndrome
	Tuberculosis
	Goodpasture's disease

Dashboard

Overall score: **0%**

1 -

□ Question 152 of 200

□ □

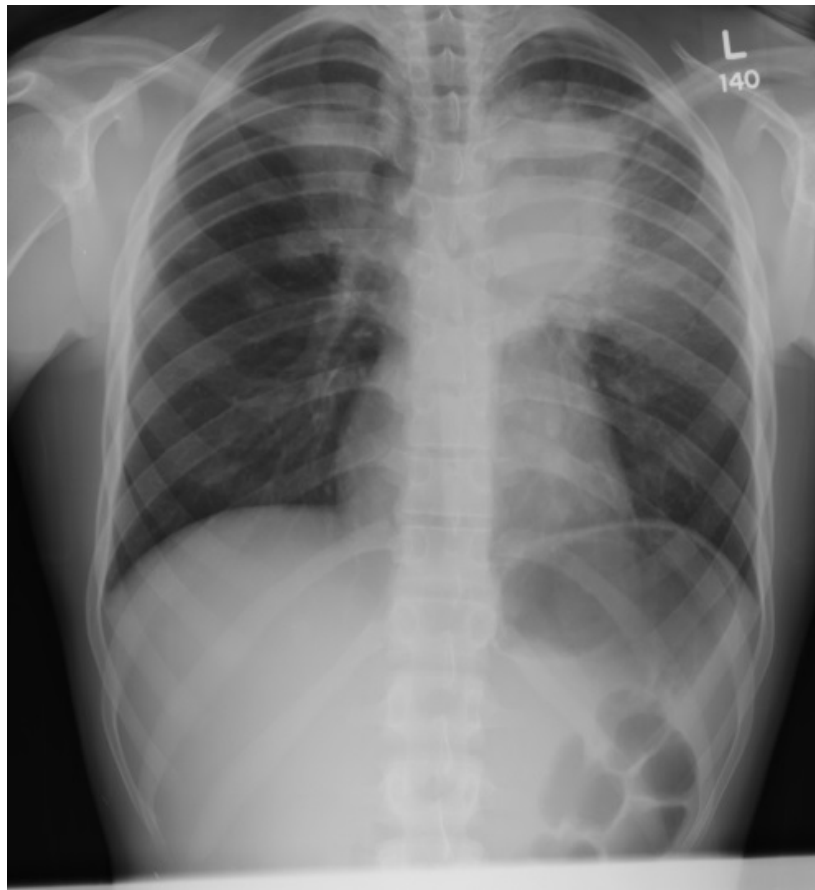
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WCC	11.3 *10 ⁹ /l
Sodium	137 mmol/l
Potassium	4.2 mmol/l
Urea	6.4 mmol/l
Creatinine	123 µmol/l
CRP	188 mg/L

Urine dip: blood +++, leucocytes +

A chest x-ray is requested:



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Later tests during his admission show the following;

c-ANCA	Positive
p-ANCA	Positive
Anti-GBM	Negative

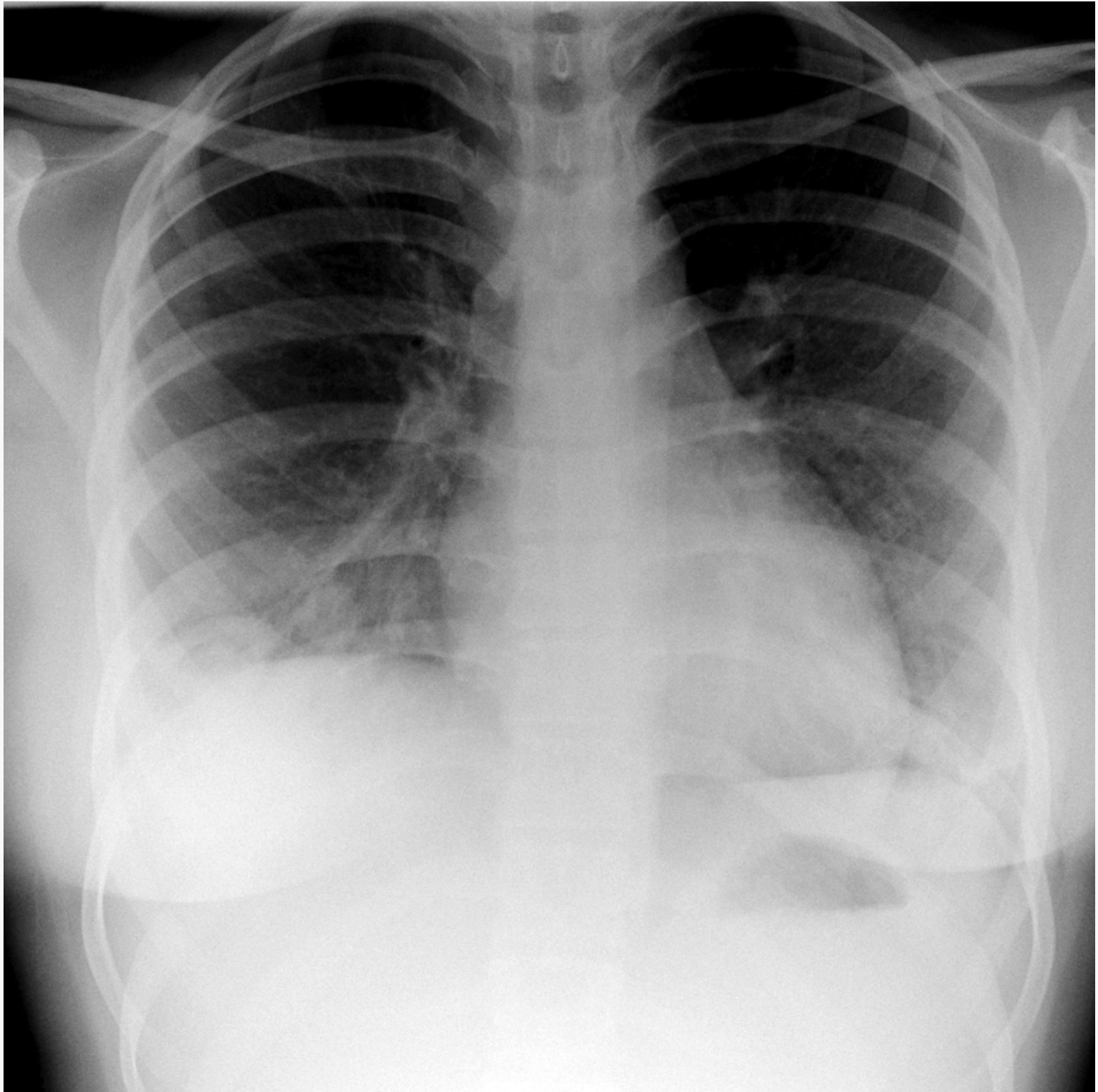
What is the most likely diagnosis?

	Granulomatosis with polyangiitis
	Cryptogenic organizing pneumonia
	Churg-Strauss syndrome
	Tuberculosis
	Goodpasture's disease

Dashboard

Overall score: **0%**

1 -



Question 152 of 200

□ □

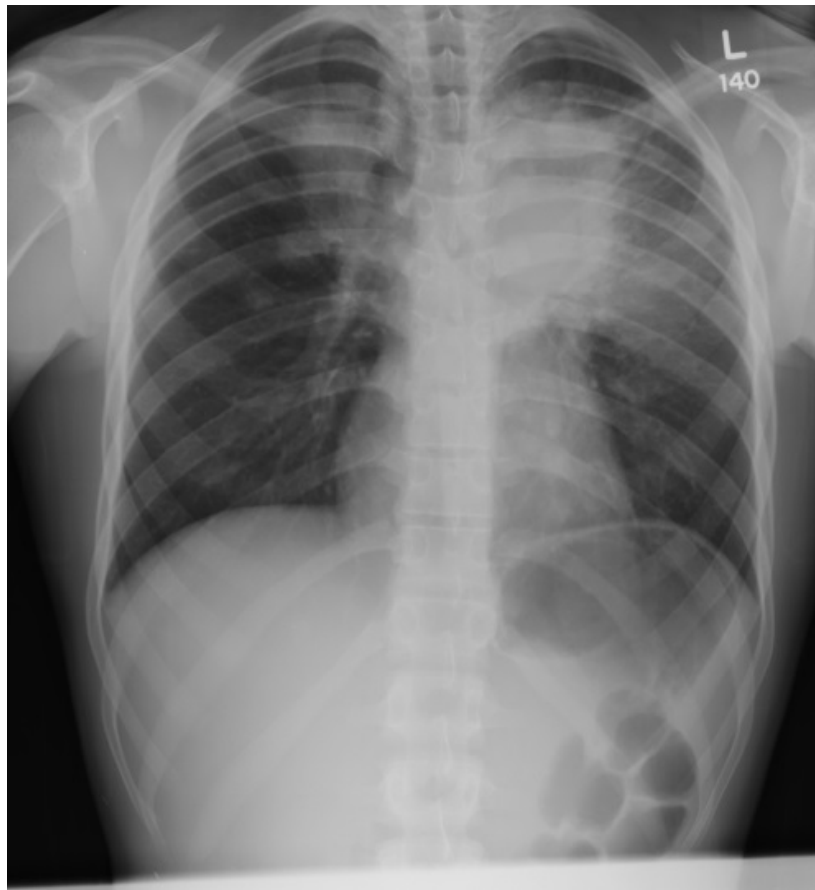
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Potassium	4.2 mmol/l
Urea	6.4 mmol/l
Creatinine	123 µmol/l
CRP	188 mg/L

Urine dip: blood +++, leucocytes +

A chest x-ray is requested:



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Later tests during his admission show the following;

c-ANCA	Positive
p-ANCA	Positive
Anti-GBM	Negative

What is the most likely diagnosis?

	Granulomatosis with polyangiitis
	Cryptogenic organizing pneumonia
	Churg-Strauss syndrome
	Tuberculosis
	Goodpasture's disease

Dashboard

Overall score: **0%**

1 -



Question 153 of 200

□ □

A 72-year-old man is being treated on the ward for a severe infective exacerbation of COPD. On the ward round you notice he is more drowsy than usual. He is receiving intravenous antibiotics and nebulised salbutamol, driven by oxygen at 10 litres/minute. He requested the nebuliser as it relieves the distressing breathlessness he develops during exacerbations.

On examination his heart rate is 90 beats per minute, blood pressure is 140/80 mmHg and respiratory rate is 19 breaths per minute, oxygen saturations are 98%.

Arterial blood gas:

pH	7.27 (7.35-7.45)
PaO ₂	18.0 KPa (11.3-12.6)
PCO ₂	9 kPa (4.7-6.0)
Bicarbonate	30 mmol/L (21-29)

What is the most appropriate management?

	Add nebulised ipratropium bromide and re-check ABG
	Intravenous aminophylline and re-check ABG
	Stop oxygen immediately and re-check ABG
	Start non-invasive ventilation and re-check ABG
	Gradually step down oxygen to compressed air and re-check ABG

Overall score: **0%**

1 -

Question 153 of 200

□ □

A 72-year-old man is being treated on the ward for a severe infective exacerbation of COPD. On the ward round you notice he is more drowsy than usual. He is receiving intravenous antibiotics and nebulised salbutamol, driven by oxygen at 10 litres/minute. He requested the nebuliser as it relieves the distressing breathlessness he develops during exacerbations.

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Bicarbonate	30 mmol/L (21-29)

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	Intravenous aminophylline and re-check ABG
	Stop oxygen immediately and re-check ABG
	Start non-invasive ventilation and re-check ABG
	Gradually step down oxygen to compressed air and re-check ABG

Overall score: **0%**

1 -

Question 154 of 200



A 67-year-old patient is reviewed in oncology clinic. He has recently been diagnosed with mesothelioma following a pleural biopsy. He has a past medical history of hypothyroidism, pseudogout and depression. He is concerned about the financial implications and is due to seek compensation. He has worked as a plumber for all of his professional life and wants to know when the asbestos exposure most likely occurred to cause him to develop mesothelioma.

How long ago would his asbestos exposure occurred?

	>50 years ago
	>30 years ago
	>10 years ago
	>5 years ago
	>2 year ago

Dashboard

Overall score: 0%

1 -

Question 154 of 200

□ □

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How long ago would his asbestos exposure occurred?

<input type="radio"/>	>50 years ago
<input checked="" type="radio"/>	>30 years ago
<input type="radio"/>	>10 years ago
<input type="radio"/>	>5 years ago
<input type="radio"/>	>2 year ago

Dashboard

Overall score: **0%**

1 -

□ Question 155 of 200



A 66-year-old gentleman presented with a 4 day history of cough associated with green sputum. He has also been feeling more breathless, wheezy, feverish at times and having some right sided pleuritic chest pains. His past medical history includes chronic obstructive pulmonary disease, hypertension and diabetes. He has a 40 pack year history of smoking but he stopped 3 years ago.

On examination, he looks unwell, flushed and breathless at rest. His heart sounds are normal and he has right basal crackles with bronchial breathing and wheeze. There is no leg oedema or tenderness. His vital signs show pulse of 120 beats per minute, blood pressure of 120/70 mmHg, SaO₂ = 89% on 24% oxygen, respiratory rate of 32 breaths per minute and T=38.5°C.

His Electrocardiogram reveals sinus tachycardia and the chest X-ray confirms right basal consolidation.

The following bloods tests have been obtained:

Hb	13.1 g/dl
Platelets	180 * 10 ⁹ /l
WBC	15.4 * 10 ⁹ /l

Na ⁺	135 mmol/l
K ⁺	4.9 mmol/l
Urea	10 mmol/l
Creatinine	120 µmol/l
CRP	180 mg/l

pH	7.28
pCO ₂	5.0 kPa
pO ₂	8.5 kPa

HCO3-	15 mEq/l
-------	----------

What is the best management?

	Intravenous fluids, intravenous antibiotics, steroids, nebulisers and non-invasive ventilation
	Intravenous fluids, intravenous antibiotics, nebulisers and steroids
	Intravenous fluids, oral antibiotics, nebulisers and steroids
	Oral fluids, intravenous antibiotics, nebulisers and non-invasive ventilation
	Oral fluids, oral antibiotics, nebulisers and steroids

Dashboard

Overall score: 0%

1 -

□ Question 155 of 200



A 66-year-old gentleman presented with a 4 day history of cough associated with green sputum. He has also been feeling more breathless, wheezy, feverish at times and having some right sided pleuritic chest pains. His past medical history includes chronic obstructive pulmonary disease, hypertension and diabetes. He has a 40 pack year history of smoking but he stopped 3 years ago.

On examination, he looks unwell, flushed and breathless at rest. His heart sounds are normal and he has right basal crackles with bronchial breathing and wheeze. There is no leg oedema or tenderness. His vital signs show pulse of 120 beats per minute, blood pressure of 120/70 mmHg, SaO₂ = 89% on 24% oxygen, respiratory rate of 32 breaths per minute and T=38.5°C.

His Electrocardiogram reveals sinus tachycardia and the chest X-ray confirms right basal consolidation.

The following bloods tests have been obtained:

Hb	13.1 g/dl
Platelets	180 * 10 ⁹ /l
WBC	15.4 * 10 ⁹ /l

Na ⁺	135 mmol/l
K ⁺	4.9 mmol/l
Urea	10 mmol/l
Creatinine	120 µmol/l
CRP	180 mg/l

pH	7.28
pCO ₂	5.0 kPa
pO ₂	8.5 kPa

HCO3-	15 mEq/l
-------	----------

What is the best management?

	Intravenous fluids, intravenous antibiotics, steroids, nebulisers and non-invasive ventilation
	Intravenous fluids, intravenous antibiotics, nebulisers and steroids
	Intravenous fluids, oral antibiotics, nebulisers and steroids
	Oral fluids, intravenous antibiotics, nebulisers and non-invasive ventilation
	Oral fluids, oral antibiotics, nebulisers and steroids

Dashboard

Overall score: **0%**

1 -

Question 156 of 200

□ □

A 64-year-old cachectic lady presents to the emergency department with difficulty in breathing. She reports smoking since she was 14 years old. Chest X-Ray reveals a large right sided pleural effusion. A sample is obtained under ultrasound-guidance for evaluation. CT does not identify a cause. The results of the pleural aspiration demonstrate an exudative effusion and histology is suggestive of an adenocarcinoma with positive TTF-1 stain. What is the most likely cause for the effusion?

	Non-small cell lung cancer
	Small cell lung cancer
	Ovarian carcinoma
	Breast carcinoma
	Mesothelioma

Dashboard

Overall score: 0%

1 -

Question 156 of 200

□ □

A 64-year-old cachectic lady presents to the emergency department with difficulty in breathing. She reports smoking since she was 14 years old. Chest X-Ray reveals a large right sided pleural effusion. A sample is obtained under ultrasound-guidance for evaluation. CT does not identify a cause. The results of the pleural aspiration demonstrate an exudative effusion and histology is suggestive of an adenocarcinoma with positive TTF-1 stain. What is the most likely cause for the effusion?

	Non-small cell lung cancer
	Small cell lung cancer
	Ovarian carcinoma
	Breast carcinoma
	Mesothelioma

Dashboard

Overall score: **0%**

1 -

Question 157 of 200

□ □

A 63-year-old man was admitted two hours ago with an infective exacerbation of COPD. He had become rapidly unwell following one day of a productive cough, developing worsening fever, shortness of breath and chest tightness. Arterial blood gas demonstrated that he was acidotic in type two respiratory failure despite treatment with back-to-back nebulisers, IV hydrocortisone and IV antibiotics. He was started on non-invasive ventilation (NIV) with IPAP of 10cmH₂O and EPAP of 4cmH₂O. This has been increased to IPAP of 16cmH₂O. During a review of this patient, the nurses ask what should be done about his nebulisers, prescribed 2 hourly, during NIV treatment.

How should he be treated with nebulisers whilst having NIV?

	Add nebulisers into NIV mask
	Take off mask to administer nebulisers
	Hold nebulisers whilst on NIV
	Give IV salbutamol instead of nebulised
	Stop NIV whilst on 2 hourly nebulisers

Dashboard

Overall score: 0%

1 -

Question 157 of 200

□ □

A 63-year-old man was admitted two hours ago with an infective exacerbation of COPD. He had become rapidly unwell following one day of a productive cough, developing worsening fever, shortness of breath and chest tightness. Arterial blood gas demonstrated that he was acidotic in type two respiratory failure despite treatment with back-to-back nebulisers, IV hydrocortisone and IV antibiotics. He was started on non-invasive ventilation (NIV) with IPAP of 10cmH₂O and EPAP of 4cmH₂O. This has been increased to IPAP of 16cmH₂O. During a review of this patient, the nurses ask what should be done about his nebulisers, prescribed 2 hourly, during NIV treatment.

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	Hold nebulisers whilst on NIV
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	Stop NIV whilst on 2 hourly nebulisers

Dashboard

Overall score: **0%**

1 -

□ Question 158 of 200

□ □

A 28-year-old male presents to the emergency department complaining of shortness of breath. For the last week he has felt generally unwell with a headache, malaise and lethargy, but felt breathless this afternoon hence his presentation. On systems review, he also admits to having some generalised abdominal pain throughout the day yesterday associated with diarrhoea. He is otherwise fit and well, takes no regular medications and does not smoke. He admits to drinking one or two beers every evening and occasionally more at the weekends. He is a primary school teacher and lives with his wife and two small children, none of whom have been unwell recently. On examination, he has a temperature of 38.9°C, a heart rate of 105 beats/minute and a blood pressure of 105/70 mmHg. His respiratory rate is 26 breaths/minute, his oxygen saturations 92% breathing room air and on auscultation to his chest there are a few crepitations bibasally. He has some routine blood tests performed.

Hb	109 g/L
MCV	105 fL
Platelets	390 * 10 ⁹ /L
WBC	16.5 * 10 ⁹ /L
CRP	240 mg/L
Bilirubin	50 µmol/L
ALT	40 u/L
ALP	135 u/L

What is the most likely diagnosis?

	Alcoholic liver disease
	Gilbert's syndrome
	Mycoplasma pneumonia
	Hypothyroidism

	Acute cholecystitis
--	---------------------

Dashboard

Overall score: 0%

1 -

□ Question 158 of 200

□ □

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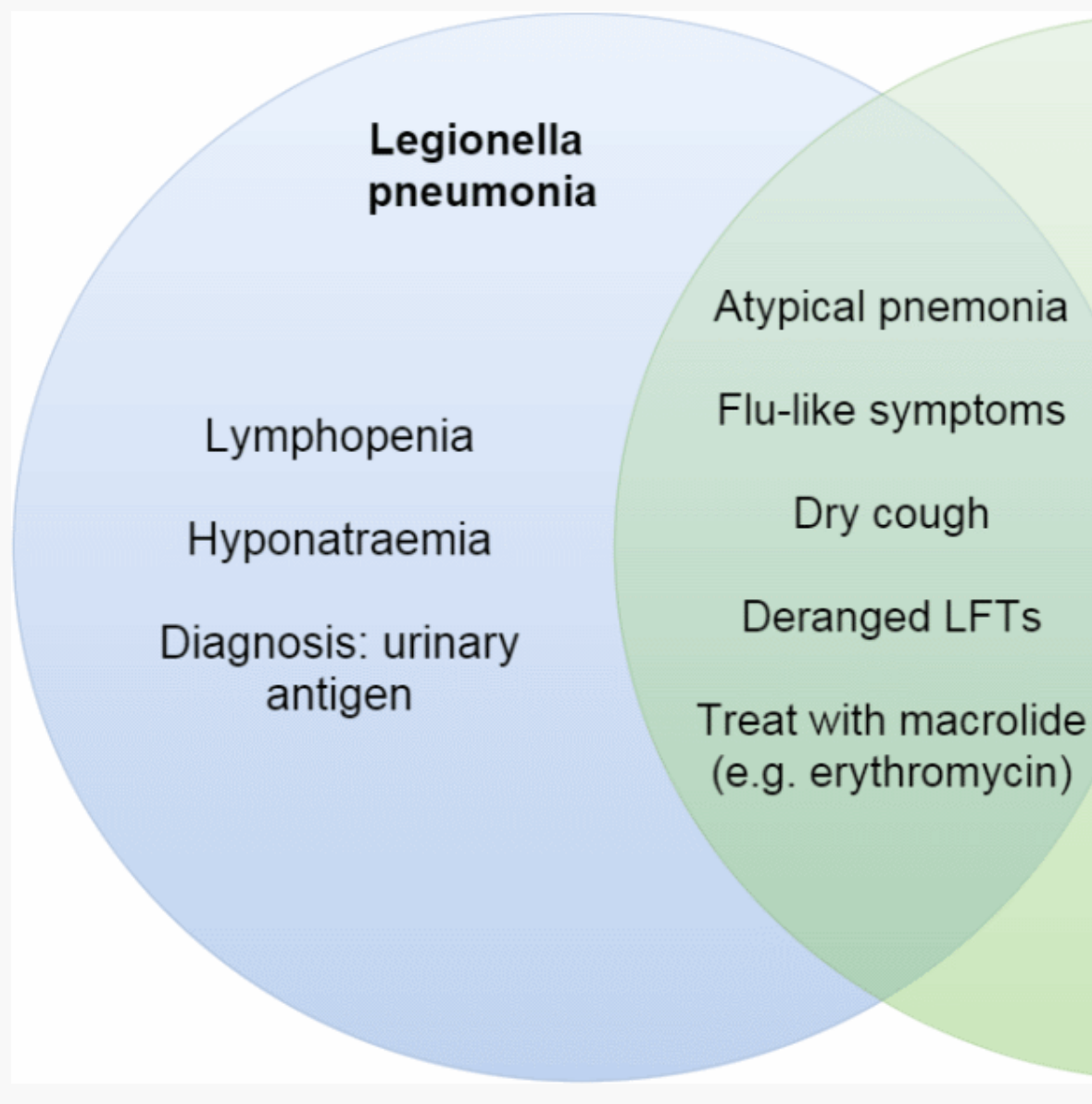
Dashboard

Overall score: **0%**
1 -

Question 158 of 200

A 28-year-old male presents with a 2-week history of feeling generally unwell with a flu-like illness. On systems review, he also admits to having diarrhoea. He is otherwise healthy, drinks one or two beers every evening, works as a teacher, has a wife and two small children, a heart rate of 105 beats/min, oxygen saturations 92% on room air, and has some routine blood test results as follows:

Hb	109 g/L
MCV	105 fL
Platelets	$390 \times 10^9/\text{L}$
WBC	$16.5 \times 10^9/\text{L}$
CRP	240 mg/L
Bilirubin	50 $\mu\text{mol/L}$
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What is the most likely diagnosis?

	Alcoholic liver disease
	Gilbert's syndrome
	Mycoplasma pneumonia
	Hypothyroidism

	Acute cholecystitis
--	---------------------

Dashboard

Overall score: **0%**
1 -

Question 159 of 200

□ □

An 18-year-old man from Bangladesh presents to the emergency department with shortness of breath that has been worsening over the last couple of hours. A friend reports that he has had a sore throat over the last couple of days and that he was found in his room having shortness of breath and a fever, which is why she brought him into the emergency department. He does not have any relevant past medical history and family history is unknown.

His observations revealed a temperature of 39.2°C, a respiratory rate of 28 breaths per minute, an oxygen saturations of 92% on 15L of oxygen, a heart rate of 118 beats per minute and a blood pressure of 95/40 mmHg. Examination revealed stridor throughout the chest and the man was sweaty and had signs of peripheral cyanosis.

What is the most appropriate next step in this patient's treatment?

	Intravenous corticosteroids
	Intravenous adrenaline
	Endotracheal intubation
	Intramuscular adrenaline
	Intravenous antibiotics

Dashboard

Overall score: 0%

1 -

Question 159 of 200

□ □

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	Intravenous adrenaline
	Endotracheal intubation
	Intramuscular adrenaline
	Intravenous antibiotics

Dashboard

Overall score: **0%**

1 -

□ Question 160 of 200



A 60-year-old caucasian female attends the respiratory clinic for review, She has been referred by her GP after presenting complaining of a chronic cough which has persisted for 6 months. The cough is productive, however she denies any haemoptysis. The patient's husband has commented that she appears to have lost weight during this time period, and she admits to unintentionally going down a dress size.

Before the onset of her cough, the patient reports that she had been reasonably fit and well, walking half an hour every day. She has never smoked and does not have any underlying respiratory pathology. She denies any history of fever or night sweats and has recently traveled to Italy for a summer holiday where she visited a famous bird sanctuary.

You review her chest radiograph which was performed prior to the clinic. There is an increased opacity in the right upper lung field. You perform a number of further investigations detailed below:

Hb	140g/l	Na ⁺	138 mmol/l
Platelets	400 * 10 ⁹ /l	K ⁺	5.0 mmol/l
WBC	11.0 * 10 ⁹ /l	Urea	3.0 mmol/l
Neuts	6.6 * 10 ⁹ /l	Creatinine	89 µmol/l
Lymphs	2.0 * 10 ⁹ /l	CRP	18 mg/l
Eosin	0.01 * 10 ⁹ /l	IFNγ-release assay	Negative
Sputum MC&S	Normal Flora	Sputum Acid Fast Bacilli (AFB)	Positive x 3

You also send the patient for a high resolution CT (HRCT) scan, which demonstrates a cavity in the right upper lobe with associated tree-in-bud appearances in the surrounding lung. There is no associated lymphadenopathy. What is the most likely causative organism for this presentation?

	Klebsiella species
	Mycobacterium tuberculosis
	Mycobacterium kansasii

	Allergic bronco-pulmonary aspergillosis (ABPA)
	Staphylococcal aureus

Dashboard

Overall score: **0%**

1 -

□ Question 160 of 200



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	Mycobacterium tuberculosis
	Mycobacterium kansasii

	Allergic bronco-pulmonary aspergillosis (ABPA)
	Staphylococcal aureus

Dashboard

Overall score: **0%**
1 -

Question 161 of 200

□ □

A 48-year-old male presents to the respiratory clinic with his partner. They are concerned as he has lost 5 kgs in weight over the last three months. He also reports a productive cough which has been troubling him for a similar time period. He reports that he is currently producing approximately half a cup of phlegm each day. He denies fevers or night sweats and systems review is unremarkable.

You send the patient for a chest X-ray which is reported as showing multiple cavitating lesions. Sputum microscopy, sensitivities and culture (MC&S) are all negative and a HIV test is negative. You refer the patient for a bronchoscopy and bronco-alveolar lavage (BAL) to aid your diagnosis. Several weeks later you receive a call from the microbiology registrar on call to inform you that the patients sputum has cultured a non-tuberculous mycobacterium (*Mycobacterium intracellulare*).

You call the patient back into clinic and find that his symptoms have persisted since his last visit. What is the most appropriate management plan for this individual?

	Rifampicin, isoniazid, ethambutol, pyrazinamide
	Repeat sputum cultures
	Clarithromycin monotherapy
	Rifampicin, clarithromycin and ethambutol
	Rifampicin and isoniazid

Dashboard

Overall score: 0%

1 -

Question 161 of 200

□ □

A 48-year-old male presents to the respiratory clinic with his partner. They are concerned as he has lost 5 kgs in weight over the last three months. He also reports a productive cough which has been troubling him for a similar time period. He reports that he is currently producing approximately half a cup of phlegm each day. He denies fevers or night sweats and systems review is unremarkable.

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	Rifampicin, clarithromycin and ethambutol
	Rifampicin and isoniazid

Dashboard

Overall score: **0%**

1 -

Question 162 of 200

□ □

You review a 67-year-old patient in the respiratory clinic with a known diagnosis of chronic obstructive pulmonary disease. He has a 30 pack year smoking history. He remains breathless despite taking inhaled Atrovent (ipratropium) as required started by his GP. On recent spirometry his FEV1 is 54% predicted. On examination today there is bilateral wheeze but no signs of right ventricular failure. Oxygen saturations on air are 94%. What would be the most appropriate next step in inhaled treatment?

	Combivent (salbutamol + ipratropium), discontinue Atrovent
	Fostair (beclomethasone + formeterol), continue Atrovent
	QVAR (beclomethasone), continue Atrovent
	Salbutamol, continue Atrovent
	Spiriva (tiotropium), discontinue Atrovent

Dashboard

Overall score: 0%

1 -

Question 162 of 200

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	QVAR (beclomethasone), continue Atrovent
	Salbutamol, continue Atrovent
	Spiriva (tiotropium), discontinue Atrovent

Dashboard

Overall score: **0%**

1 -

Question 163 of 200

□ □

A 43-year-old Afro-Caribbean male presents with sudden onset palpitations and feeling generally unwell for 2 hours. An admission ECG in the emergency department demonstrates ventricular tachycardia. His heart rate is 80 beats/ minute with a blood pressure of 140/75mmHg. The patient is chemically cardioverted back to sinus rhythm with a single intravenous bolus of amiodarone. The patient was commenced on haemodialysis 9 months ago after developing end-stage renal failure over a course of 16 months with no conclusive underlying cause found for the deteriorating renal function. He also complains of a new dry cough over the past 18 months, weight loss of at least one and a half stone and general malaise, which he attributes to his deteriorating kidneys.

On examination, the patient has normal heart sounds with no additional murmurs. Auscultation of his chest demonstrates biapical fine inspiratory crackles with no wheeze. Abdominal examination reveals a mild 2cm hepatomegaly with no splenomegaly. An arteriovenous fistula is noted in the left brachiocephalic region. No skin rashes are noted. An admission chest X-ray demonstrates no clear consolidation, reticular opacities in both apices and prominent bilateral hilar, with no cardiomegaly or tramlining.

Blood tests are as follows:

Hb	134 g/l
Platelets	$292 \times 10^9/l$
WBC	$12.5 \times 10^9/l$

Na ⁺	131 mmol/l
K ⁺	5.9 mmol/l
Urea	22.6 mmol/l
Creatinine	540 μ mol/l

Bilirubin	17 μ mol/l
ALP	55 u/l
ALT	70 u/l

CRP	12 mg/l
ACE (angiotensin converting enzyme)	negative

Pulmonary function tests: FVC 60% predicted FEV1 92% predicted

A bronchoalveolar lavage is performed, demonstrating lymphocytosis of 25%, CD4:CD8 ratio of 5:1, a transbronchial biopsy demonstrates non-caseating granulomas.

What is the underlying diagnosis?

	Human immunodeficiency virus (HIV)
	Miliary tuberculosis
	Amyloidosis
	Sarcoidosis
	Lymphoma

Dashboard

Overall score: 0%

1 -

Question 163 of 200

□ □

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Dashboard

Overall score: 0%
1 -

Question 164 of 200

□ □

A 79-year-old woman is brought in by ambulance to the emergency department. She has been feeling progressively unwell with a productive cough. She has coughed up rusty coloured phlegm for the last seven days and has also seen streaks of blood in the last two days. She has been feeling nauseous and been off her food too. She has a past medical history of hypertension, glaucoma and diverticular disease.

On examination, she has unilateral crepitations in her chest, appears unwell and feels hot and clammy to touch. Her observations show blood pressure of 105/63mmHg, oxygen saturations of 92% on 3L of oxygen via nasal cannula, a temperature of 38.2°C, respiratory rate of 27/min, and a heart rate of 91/min. Her blood tests are pending. Her abbreviated mental test score (AMTS) is 8/10.

Apart from her age, what is a predictor for severity of chest infection for her?

	Temperature
	Blood pressure
	Respiratory rate
	Heart rate
	AMTS

Dashboard

Overall score: 0%

1 -

Question 164 of 200

□ □

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Apart from her age, what is a predictor for severity of chest infection for her?

	Temperature
	Blood pressure
	Respiratory rate
	Heart rate
	AMTS

Dashboard

Overall score: **0%**

1 -

Question 165 of 200

□ □

A 36 year old woman presents to the medical assessment unit with a 2 day history of pleuritic right sided chest pain, and shortness of breath. She is 38 weeks pregnant with her first child, her pregnancy so far had been uncomplicated.

On examination, she is slightly tachypnoeic, with no added sounds on chest auscultation.

There is no clinical evidence of a deep vein thrombosis. Her oxygen saturations are 95% on room air, heart rate 98/min.

What is the next appropriate investigation?

	CTPA
	D Dimer
	Chest x-ray
	V/Q scan
	Bilateral leg dopplers

Dashboard

Overall score: **0%**

1 -

Question 165 of 200

□ □

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Dashboard

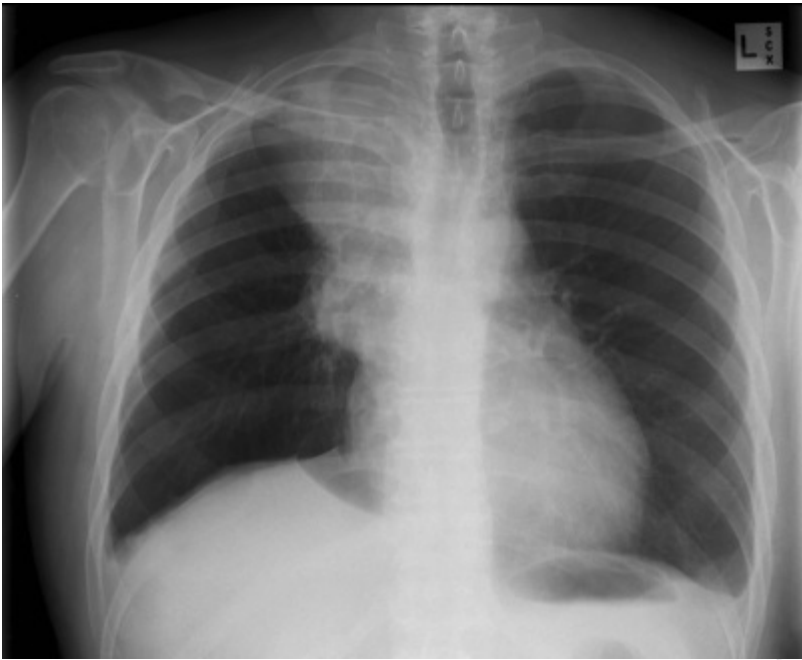
Overall score: **0%**

1 -

Question 166 of 200

□ □

A 79-year-old is investigated for weight loss.



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What is the most likely diagnosis?

	Paget's disease of the bone
	Lung cancer
	Liver cancer
	Reactivation of pulmonary tuberculosis
	Mesothelioma

Dashboard

Overall score: **0%**

1 -

Question 166 of 200

□ □

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What is the most likely diagnosis?

	Paget's disease of the bone
	Lung cancer
	Liver cancer
	Reactivation of pulmonary tuberculosis
	Mesothelioma

Dashboard

Overall score: **0%**

1 -

□ Question 167 of 200

□ □

A 59-year-old man is investigated for increasing shortness-of-breath. This has been getting progressively worse for the past 6 months and is associated with a dry cough. He has received two courses of antibiotics from his GP which only temporarily improved his symptoms. He was diagnosed with asthma as a child but has not had to use an inhaler since he was around 10-years-old. He stopped smoking 20 years ago.

On examination he is noted to have scattered crackles bilaterally, predominantly in the bases. Oxygen saturations are 96% on room air. Pulse, blood pressure and temperature are normal.

Spirometry is arranged:

FEV1	2.2 L (predicted 3.8 L)
FVC	2.7 L (predicted 4.5 L)
FEV1/FVC	81% (normal > 75%)

A chest x-ray is arranged:



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Which one of the following interventions is most likely to be beneficial?

	Bosentan
	Rotation of prophylactic antibiotic + postural drainage
	Bronchodilator therapy
	Prednisolone
	Pirfenidone

Dashboard

Overall score: **0%**

1 -

Question 167 of 200

□ □

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1 -

□ Question 167 of 200

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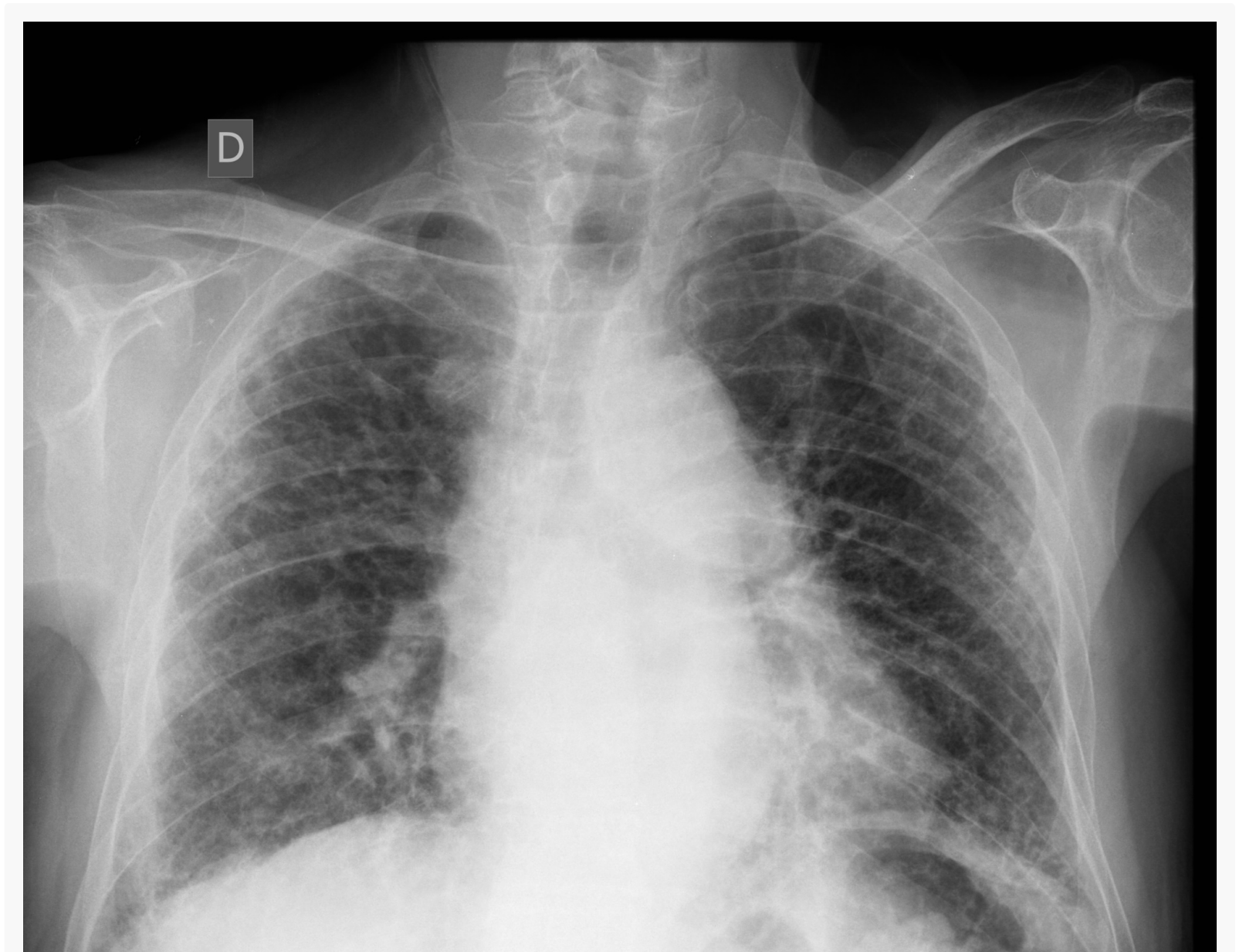
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Overall score: **0%**

1 -





□ Question 167 of 200

□ □

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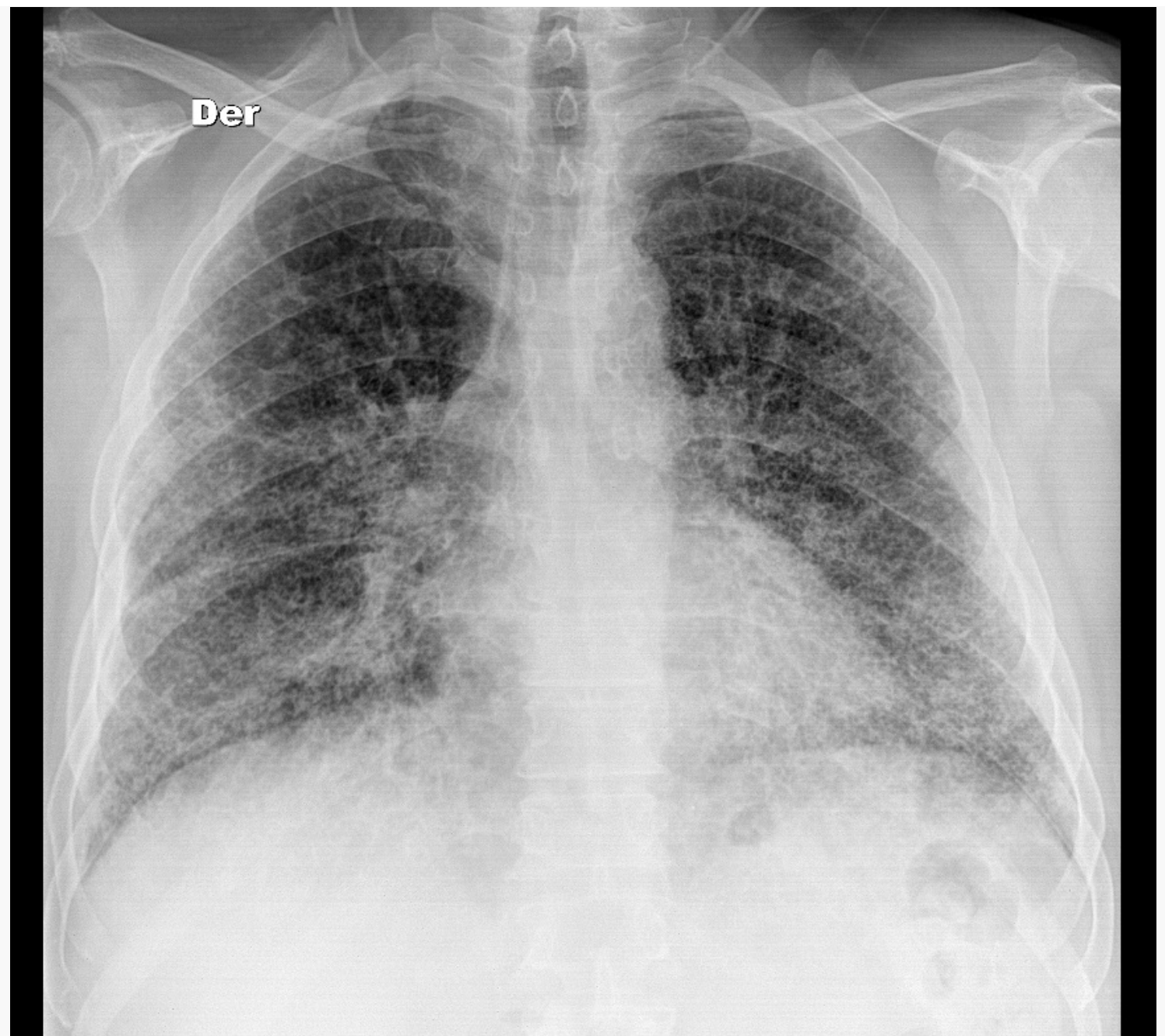
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Which one of the following interventions is most likely to be beneficial?

	Bosentan
	Rotation of prophylactic antibiotic + postural drainage
	Bronchodilator therapy
	Prednisolone
	Pirfenidone

Overall score: **0%**

1 -



□ Question 167 of 200

□ □

A 59-year-old man is investigated for increasing shortness-of-breath. This has been getting progressively worse for the past 6 months and is associated with a dry cough. He has received two courses of antibiotics from his GP which only temporarily improved his symptoms. He was diagnosed with asthma as a child but has not had to use an inhaler since he was around 10-years-old. He stopped smoking 20 years ago.

On examination he is noted to have scattered crackles bilaterally, predominantly in the bases. Oxygen saturations are 96% on room air. Pulse, blood pressure and temperature are normal.

Spirometry is arranged:

FEV1	2.2 L (predicted 3.8 L)
FVC	2.7 L (predicted 4.5 L)
FEV1/FVC	81% (normal > 75%)

A chest x-ray is arranged:



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	Prednisolone
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Overall score: **0%**

1 -



□ Question 167 of 200

□ □

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© Image used on license from Radiopaedia

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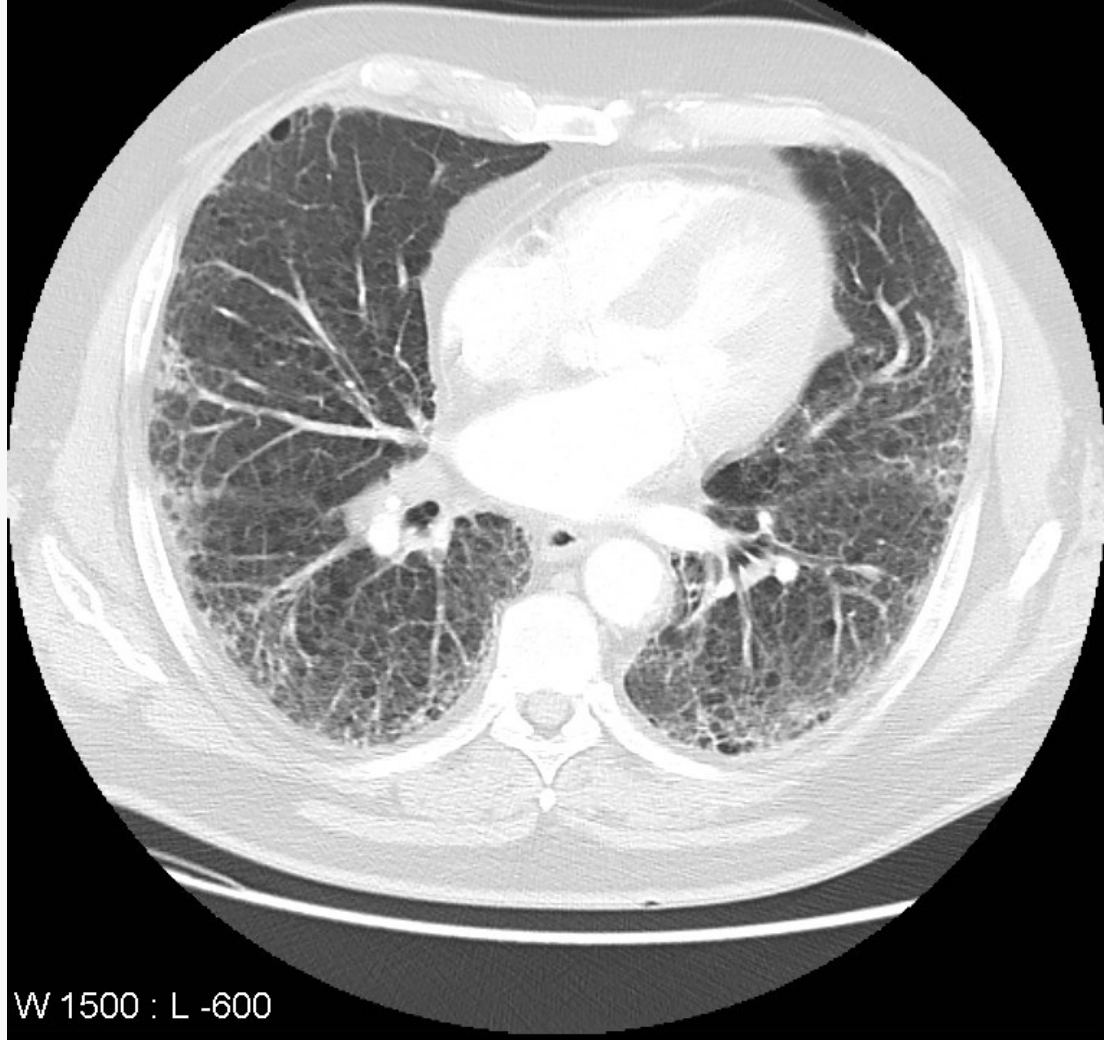
	Bosentan
	Rotation of prophylactic antibiotic + postural drainage
	Bronchodilator therapy
	Prednisolone
	Pirfenidone

Dashboard

Overall score: 0%

1 -

32



Question 168 of 200

□ □

A 63-year-old man with a new diagnosis of idiopathic pulmonary fibrosis is reviewed in respiratory clinic following initial baseline investigations. He has been suffering from progressive shortness of breath for nine months with a non-productive cough. His GP has tried to give him inhalers and antibiotics but this has not helped. He has a past medical history of hypertension, depression and gout. He is concerned about his new diagnosis, especially about his prognosis. What test is most useful in determining prognosis?

	Forced vital capacity
	6-minute walking test
	High resolution CT of the chest
	Carbon monoxide transfer factor
	FEV1/FVC ratio

Dashboard

Overall score: 0%

1 -

Question 168 of 200

□ □

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	Forced vital capacity
	6-minute walking test
	High resolution CT of the chest
	Carbon monoxide transfer factor
	FEV1/FVC ratio

Dashboard

Overall score: **0%**

1 -

Question 169 of 200

□ □

A 62-year-old gentleman comes to the respiratory clinic for review. He was seen by his GP after presenting with pleuritic chest pain and slight breathlessness. The GP was concerned and arranged for a chest X-ray which shows pleural plaques and a slight right-sided pleural effusion. He has a past medical history of type 2 diabetes, hypertension and angina. He takes ramipril, amlodipine, metformin and has a GTN spray for when he needs it. He worked as a plumber over 30 years ago. On examination he has clubbing and slightly reduced air entry in the right base of his lungs, with some dullness on percussion. A diagnosis of asbestosis is suspected. What feature of his history or examination is evidence towards poor prognosis?

	Comorbidity with ischaemic heart disease
	Shortness of breath
	Pleuritic pain
	Clubbing
	Male sex

Dashboard

Overall score: **0%**

1 -

□ Question 169 of 200

□ □

A 62-year-old gentleman comes to the respiratory clinic for review. He was seen by his GP after presenting with pleuritic chest pain and slight breathlessness. The GP was concerned and arranged for a chest X-ray which shows pleural plaques and a slight right-sided pleural effusion. He has a past medical history of type 2 diabetes, hypertension and angina. He takes ramipril, amlodipine, metformin and has a GTN spray for when he needs it. He worked as a plumber over 30 years ago. On examination he has clubbing and slightly reduced air entry in the right base of his lungs, with some dullness on percussion. A diagnosis of asbestosis is suspected. What feature of his history or examination is evidence towards poor prognosis?

	Comorbidity with ischaemic heart disease
	Shortness of breath
	Pleuritic pain
	Clubbing
	Male sex

Dashboard

Overall score: **0%****1** -

Question 170 of 200

□ □

A 91-year-old man is admitted into hospital with a severe exacerbation of his COPD. He is breathless on rest and although alert and orientated, is starting to become drowsy. His observation reveal a temperature of 37.9°C, a heart rate of 82 beats per minute, blood pressure of 116/74 mmHg, respiratory rate of 28 breaths per minute and oxygen saturations of 84% on a 28% Venturi mask.

An arterial blood gas is performed and reveals a PaO₂ of 9.0 kPa, PCO₂ of 11.4kPa, HCO₃ of 31 mmol/l and a pH of 7.29.

A decision is made to commence the man on non-invasive ventilation - which of the following is the most appropriate management for this patient?

	Inspiratory positive airways pressure (IPAP) of 10cm water and expiratory positive airways pressure (EPAP) of 4cm water at 60% flow rate of oxygen
	Inspiratory positive airways pressure (IPAP) of 10cm water and expiratory positive airways pressure (EPAP) of 4cm water at 20% flow rate of oxygen
	Inspiratory positive airways pressure (IPAP) of 10cm water and expiratory positive airways pressure (EPAP) of 4cm water at 40% flow rate of oxygen
	Inspiratory positive airways pressure (IPAP) of 10cm water and expiratory positive airways pressure (EPAP) of 6cm water at 40% flow rate of oxygen
	Inspiratory positive airways pressure (IPAP) of 4cm water and expiratory positive airways pressure (EPAP) of 10cm water at 40% flow rate of oxygen

Dashboard

Overall score: 0%

1 -

Question 170 of 200

A 91-year-old man is admitted into hospital with a severe exacerbation of his COPD. He is breathless on rest and although alert and orientated, is starting to become drowsy. His observation reveal a temperature of 37.9°C, a heart rate of 82 beats per minute, blood pressure of 116/74 mmHg, respiratory rate of 28 breaths per minute and oxygen saturations of 84% on a 28% Venturi mask.

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	Inspiratory positive airways pressure (IPAP) of 4cm water and expiratory positive airways pressure (EPAP) of 10cm water at 40% flow rate of oxygen

Dashboard

Overall score: **0%**

1 -

Question 171 of 200



A 40-year-old lady presents with dyspnoea. She describes a gradual onset of shortness of breath on exercise over several months. She has a past medical history of wheeze as an infant. She has recently commenced a intranasal steroid spray for rhinitis. She is a non-smoker.

On examination she has oxygen saturations of 91% on air. She has blood stained crusting around her anterior nares. On auscultation her chest has bilateral reduced air entry and coarse crepitations on both lung bases. Her temperature is 37.8 degrees centigrade.

Hb	13.2 g/dL
WCC	$10.3 \times 10^9/\text{L}$
Neutrophil	$7.8 \times 10^9/\text{L}$
Eosinophil	$0.07 \times 10^9/\text{L}$

Sodium	135 mmol/L
Potassium	4.5 mmol/L
Creatinine	113 $\mu\text{mol/L}$
Urea	5.4 mmol/L

CRP	230 mg/L
Chest X - ray	Bilateral basal consolidation
Urine microscopy	Culture negative RBC +++ WCC +
c-ANCA	Positive
p-ANCA	Positive
Anti-GBM	Negative

What is the most likely diagnosis?

	Pneumonia
	Churg-Strauss Syndrome
	Microscopic polyangiitis
	Granulomatosis with polyangiitis
	Goodpastures disease

Dashboard

Overall score: 0%

1 -

Question 171 of 200



A 40-year-old lady presents with dyspnoea. She describes a gradual onset of shortness of breath on exercise over several months. She has a past medical history of wheeze as an infant. She has recently commenced a intranasal steroid spray for rhinitis. She is a non-smoker.

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	Churg-Strauss Syndrome
	Microscopic polyangiitis
	Granulomatosis with polyangiitis
	Goodpastures disease

Dashboard

Overall score: **0%**
1 -

Question 171 of 200

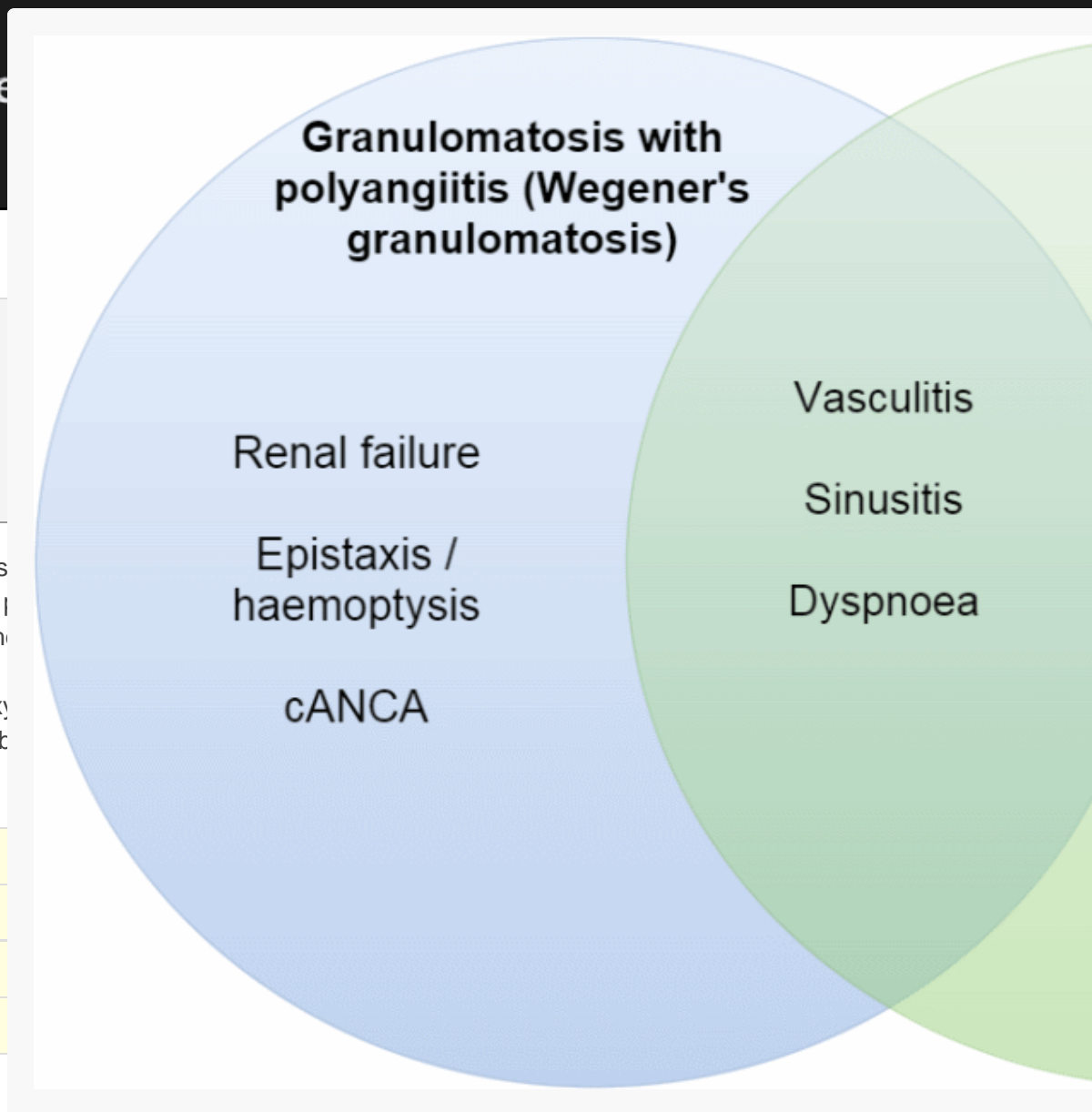
A 40-year-old lady presents several months. She has a past history of asthma and is on a low-dose steroid spray for rhinitis. She has no other significant medical history.

On examination she has oxygen saturation of 92% on room air. On auscultation her chest has bilateral basal crackles. Her temperature is 37.8 degrees centigrade.

Hb	13.2 g/dL
WCC	$10.3 \times 10^9/L$
Neutrophil	$7.8 \times 10^9/L$
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Chest X - ray	Bilateral basal consolidation
Urine microscopy	Culture negative RBC +++ WCC +
c-ANCA	Positive
p-ANCA	Positive
Anti-GBM	Negative



What is the most likely diagnosis?

	Pneumonia
	Churg-Strauss Syndrome
	Microscopic polyangiitis
	Granulomatosis with polyangiitis
	Goodpastures disease

Dashboard

Overall score: **0%**
1 -

Question 171 of 200

□ □

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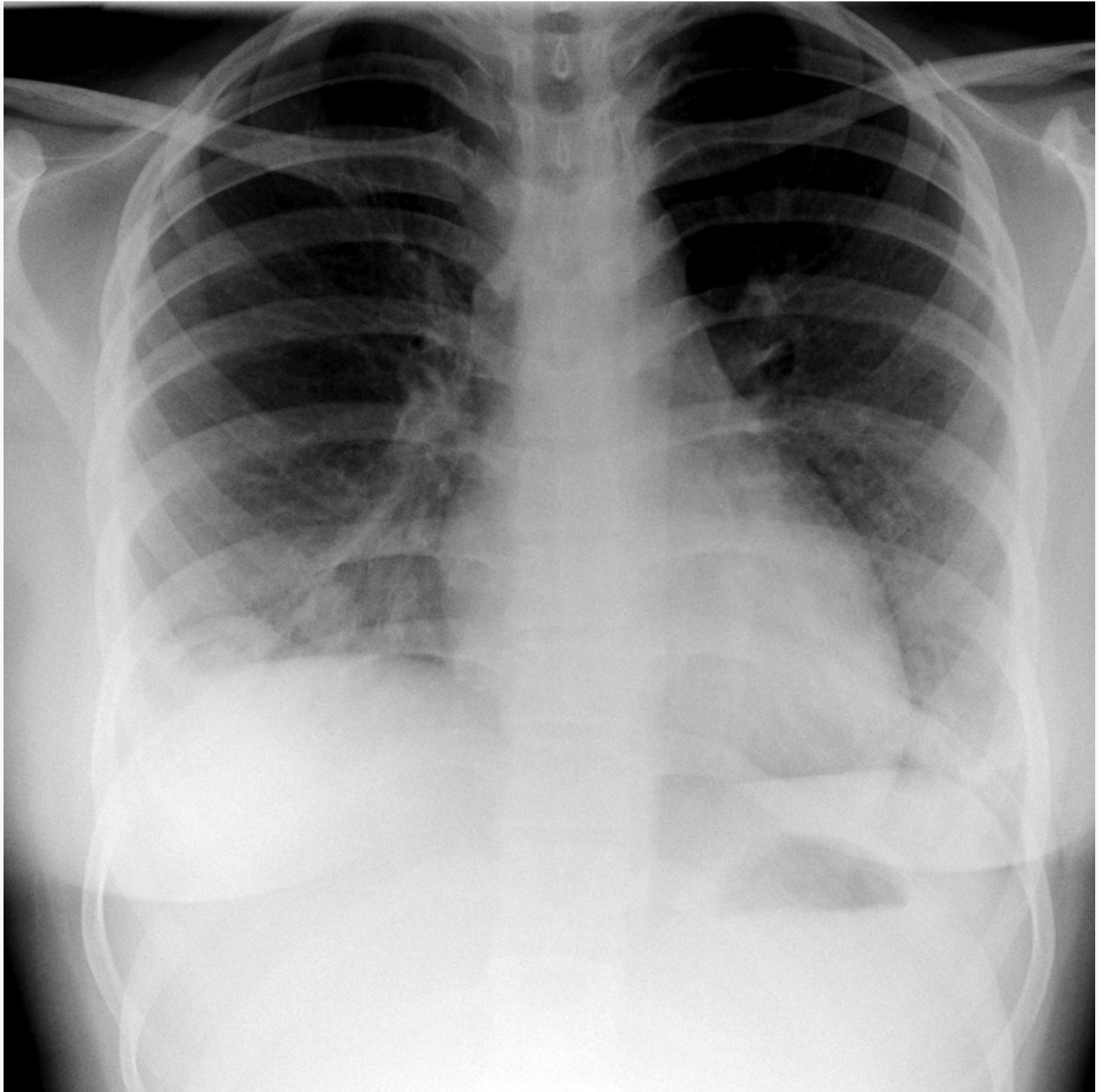
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	Churg-Strauss Syndrome
	Microscopic polyangiitis
	Granulomatosis with polyangiitis
	Goodpastures disease

Dashboard

Overall score: **0%**

1 -



Question 171 of 200

□ □

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CRP	230 mg/L
Chest X - ray	Bilateral basal consolidation
Urine microscopy	Culture negative RBC +++ WCC +
c-ANCA	Positive
p-ANCA	Positive
Anti-GBM	Negative

What is the most likely diagnosis?

	Pneumonia
	Churg-Strauss Syndrome
	Microscopic polyangiitis
	Granulomatosis with polyangiitis
	Goodpastures disease

Dashboard

Overall score: **0%**

1 -



Question 172 of 200



A 42 year old lady presents to the Emergency Department with a 3 week history of dry cough, fever and lethargy. She has no past medical history and takes no regular medications. There is no history of recent foreign travel. Clinical examination reveals inspiratory crepitations affecting the left upper zone and R lower zone. Saturations are 91% on room air. Chest x-ray shows bilateral peripheral pulmonary infiltrates.

Bloods show:

Hb	110 g/L
MCV	78 fL
WCC	$13 \times 10^9/L$
Neutrophils	$8 \times 10^9/L$
Lymphocytes	$1 \times 10^9/L$
Eosinophils	$3.1 \times 10^9/L$
Platelets	$560 \times 10^9/L$
CRP	115mg/l

What is the most appropriate treatment given the likely diagnosis?

	Oral prednisolone
	High dose co-trimoxazole
	Plasma exchange
	Rifampicin, isoniazid, ethambutol and pyrazinamide
	Amoxicillin and clarithromycin

Dashboard

Overall score: **0%**

1 -

Question 172 of 200



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	High dose co-trimoxazole
	Plasma exchange
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	Amoxicillin and clarithromycin

Dashboard

Overall score: **0%**

1 -

□ Question 173 of 200

□ □

A 40-year-old woman with a history of poorly controlled asthma is reviewed in the respiratory clinic. Her GP has tried a number of courses of antibiotics recently but her symptoms of wheeze and a productive cough have not resolved. Her inhalers have also been changed with the addition of long-acting beta agonist in addition to her salbutamol and corticosteroid inhalers, but again this has not improved her symptoms.

Routine bloods requested by the GP show the following:

Hb	12.3 g/dl	Na ⁺	141 mmol/l
Platelets	362 * 10 ⁹ /l	K ⁺	4.2 mmol/l
WBC	10.6 * 10 ⁹ /l	Urea	5.2 mmol/l
Neuts	6.9 * 10 ⁹ /l	Creatinine	69 µmol/l
Lymphs	2.3 * 10 ⁹ /l	CRP	35 mg/l
Eosin	1.4 * 10 ⁹ /l		

A chest x-ray shows the following:



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What is the most appropriate treatment?

	Prednisolone
	Itraconazole
	Etoposide + cisplatin
	Co-amoxiclav + clarithromycin
	Rifampicin, isoniazid, pyrazinamide +ethambutol

Dashboard

Overall score: 0%

1 -

□ Question 173 of 200

□ □

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Lymphs	2.3 * 10 ⁹ /l	CRP	35 mg/l
Eosin	1.4 * 10 ⁹ /l		

A chest x-ray shows the following:



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What is the most appropriate treatment?

	Prednisolone
	Itraconazole
	Etoposide + cisplatin
	Co-amoxiclav + clarithromycin
	Rifampicin, isoniazid, pyrazinamide +ethambutol

Dashboard

Overall score: **0%**

1 -

□ Question 173 of 200

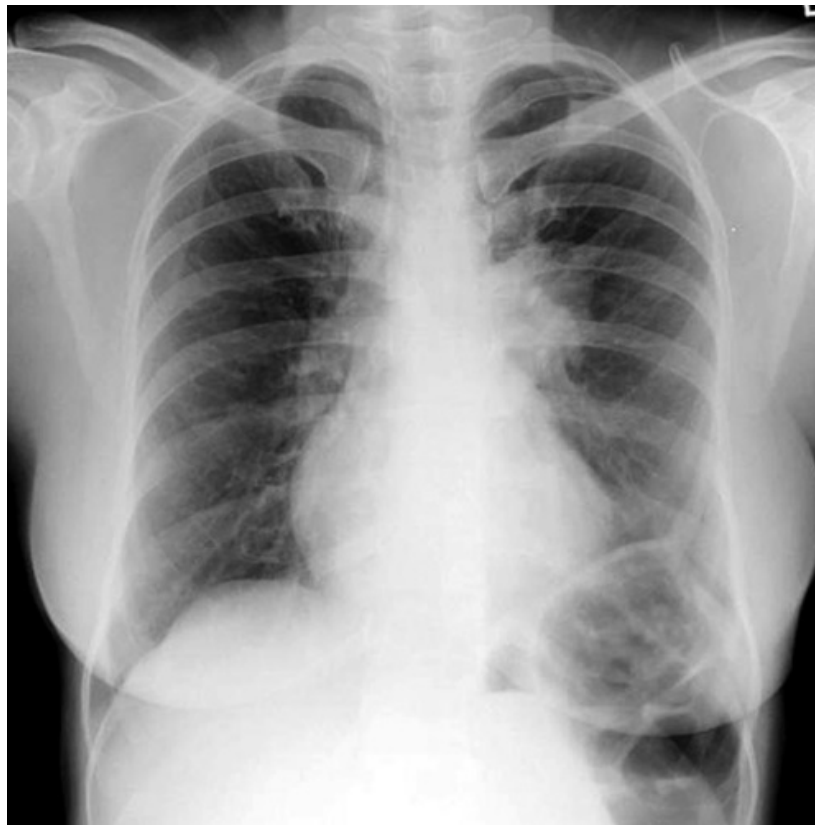
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A chest x-ray shows the following:



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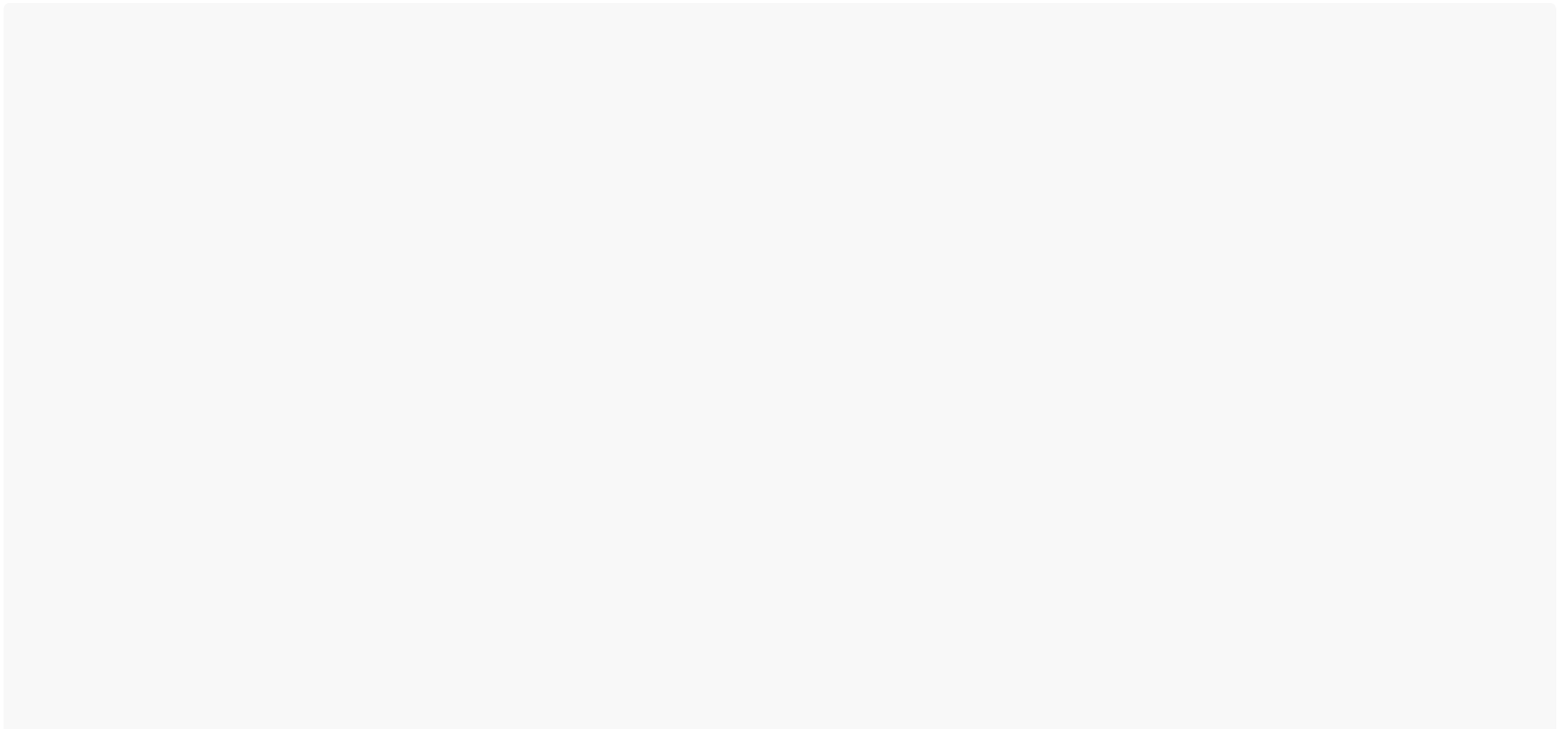
What is the most appropriate treatment?

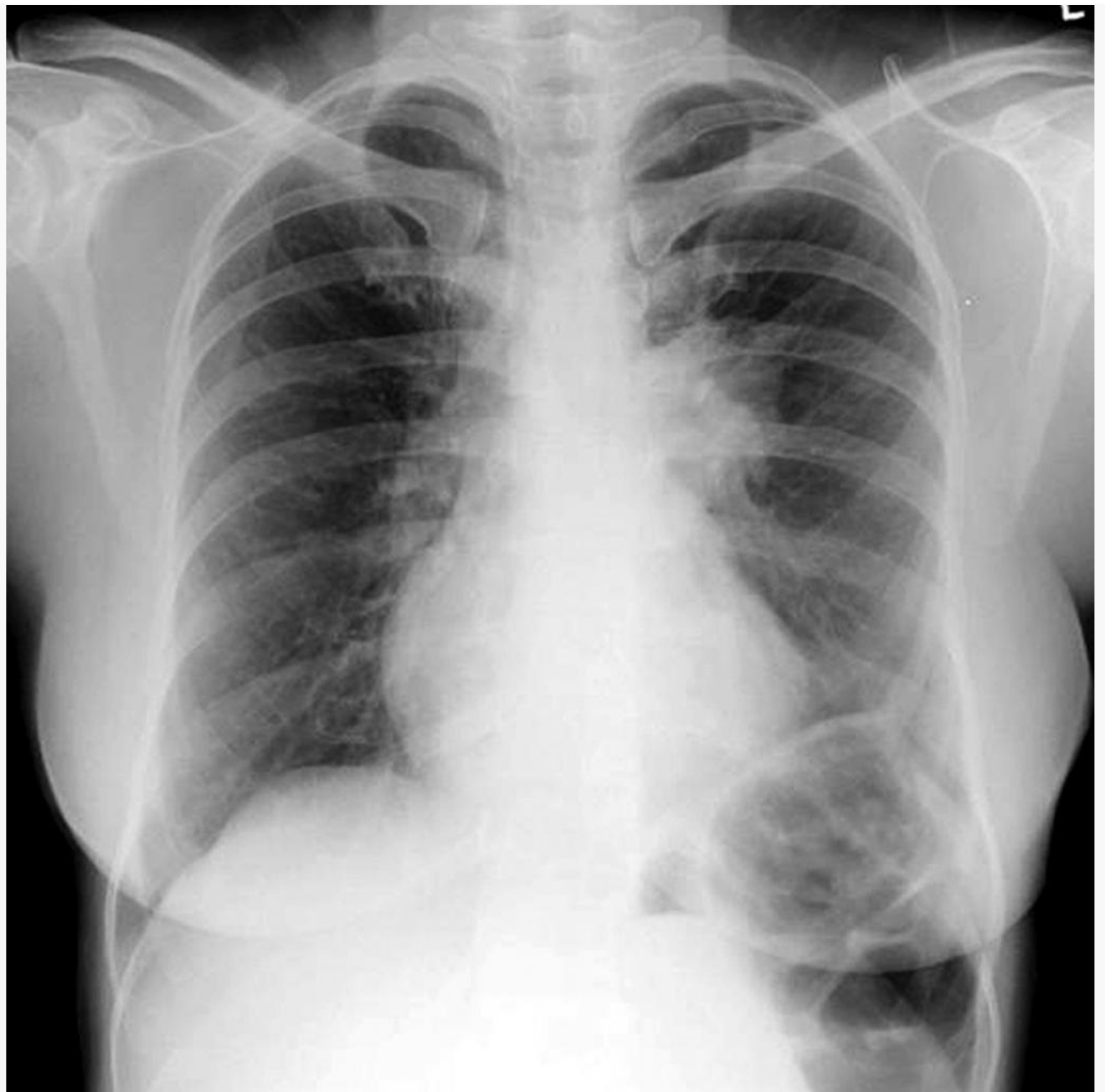
	Prednisolone
	Itraconazole
	Etoposide + cisplatin
	Co-amoxiclav + clarithromycin
	Rifampicin, isoniazid, pyrazinamide +ethambutol

Dashboard

Overall score: 0%

1 -





Question 173 of 200

□ □

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Routine bloods requested by the GP show the following:

Hb	12.3 g/dl	Na ⁺	141 mmol/l
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© Image used on license from Radiopaedia



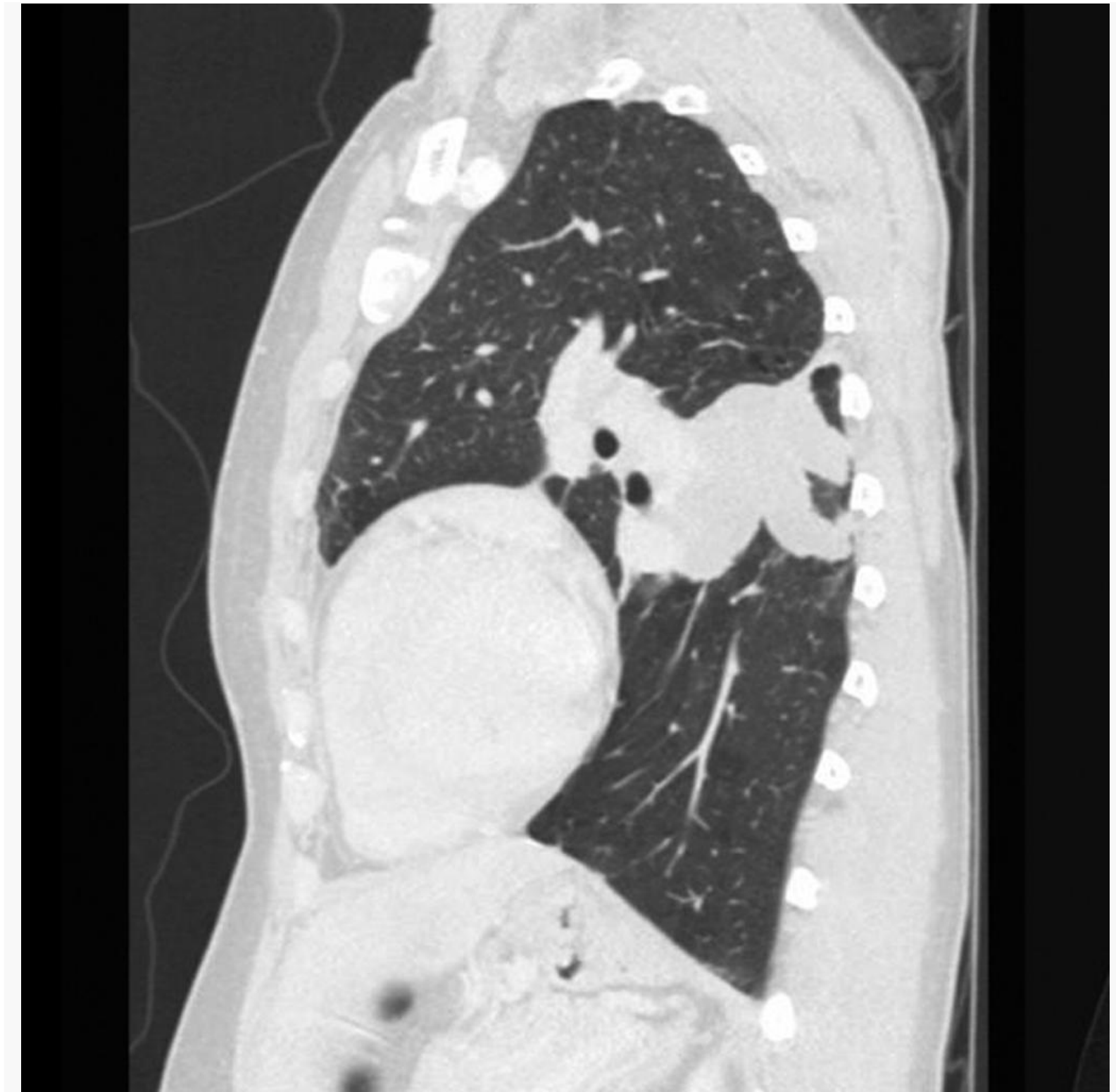
What is the most appropriate treatment?

	Prednisolone
	Itraconazole
	Etoposide + cisplatin
	Co-amoxiclav + clarithromycin
	Rifampicin, isoniazid, pyrazinamide +ethambutol

Dashboard

Overall score: 0%

1 -



Question 174 of 200

□ □

A 77-year-old active smoker with a 40 pack year history presents with his second non-infective exacerbation of COPD in 3 months. He was diagnosed with COPD two years ago and had been relatively well controlled using salbutamol as required prior to these two admissions. Two days after his admission, he reports that he is close to his baseline and would like to go home. His repeat pulmonary function tests reveal a forced expiratory volume in 1 second of 46%. Which would be most useful in optimising his COPD control?

	No change to inhaler therapy, follow up in 3 months
	Add beclometasone inhaler alone
	Add salmeterol and fluticasone combination inhaler
	Add salmeterol inhaler alone
	Long term oxygen therapy

Dashboard

Overall score: 0%

1 -

Question 174 of 200

□ □

A 77-year-old active smoker with a 40 pack year history presents with his second non-infective exacerbation of COPD in 3 months. He was diagnosed with COPD two years ago and had been relatively well controlled using salbutamol as required prior to these two admissions. Two days after his admission, he reports that he is close to his baseline and would like to go home. His repeat pulmonary function tests reveal a forced expiratory volume in 1 second of 46%. Which would be most useful in optimising his COPD control?

	No change to inhaler therapy, follow up in 3 months
	Add beclometasone inhaler alone
	Add salmeterol and fluticasone combination inhaler
	Add salmeterol inhaler alone
	Long term oxygen therapy

Dashboard

Overall score: **0%**

1 -

Question 175 of 200

□ □

You review a 57-year-old man. He was diagnosed with having asthma around 12 months ago after presenting with a persistent wheeze that was worse on exertion and at night time. A trial of salbutamol and initially improved his symptoms but he developed an infective exacerbation over winter and had Clenil 200mcg bd added to his medication around 3 months ago. Unfortunately his symptoms have not improved and he is more short-of-breath on exertion and has a persistent cough. You check his inhaler technique which is good. He gave up smoking 6 months ago, drinks alcohol in moderation and has a body mass index of 25 kg/m². What is the most important next step in management?

	Add a leukotriene receptor antagonist
	Add salmeterol
	Arrange a chest x-ray
	Increase the dose of Clenil
	Arrange spirometry

Dashboard

Overall score: 0%

1 -

Question 175 of 200

You review a 57-year-old man. He was diagnosed with having asthma around 12 months ago after presenting with a persistent wheeze that was worse on exertion and at night time. A trial of salbutamol and initially improved his symptoms but he developed an infective exacerbation over winter and had Clenil 200mcg bd added to his medication around 3 months ago. Unfortunately his symptoms have not improved and he is more short-of-breath on exertion and has a persistent cough. You check his inhaler technique which is good. He gave up smoking 6 months ago, drinks alcohol in moderation and has a body mass index of 25 kg/m². What is the most important next step in management?

	Add a leukotriene receptor antagonist
	Add salmeterol
	Arrange a chest x-ray
	Increase the dose of Clenil
	Arrange spirometry

Dashboard

Overall score: **0%**

1 -

□ Question 176 of 200



A 58-year-old smoker was referred to the respiratory outpatient clinic by his GP with a history of progressively worsening shortness of breath. His symptoms started several months ago with shortness of breath on extreme exertion but he gradually developed shortness of breath with minimal activity. He also complained of increasing tiredness and a non-productive cough had lost approximately 3 pounds in 6 months. He denied the presence of sputum production, haemoptysis or chest pain, and also denied the presence of both orthopnoea and paroxysmal nocturnal dyspnoea. He had a past medical history comprising ankylosing spondylosis diagnosed 30 years ago as well as hypertension and hypercholesterolaemia. His drug history comprised naproxen 500mg BD, lansoprazole 30mg OD, felodipine M/R 2.5mg OD and atorvastatin 20mg OD. He stated that he had been trialled with a course of methotrexate a few years ago for his ankylosing spondylosis and was subsequently stopped.

Examination revealed the presence of a well male with a blood pressure of 146/86 mmHg, heart rate 74 bpm and respiratory rate of 18/min. His oxygen saturations were 93% on air. There was no BCG scar seen on examination of his arm. Examination of his respiratory system revealed the presence of bilateral fine upper zone crackles but nil else and no respiratory distress. Examination of his cardiovascular system revealed no abnormalities including a normal JVP and the absence of pedal oedema, and examination of his gastrointestinal system was likewise unremarkable.

Initial investigations revealed the following:

Hb	166 g/l
Platelets	341 * 10 ⁹ /l
WBC	6.3 * 10 ⁹ /l
ESR	34 mm/hr
CRP	26 mg/l

Chest x-ray: Bilateral apical fibrosis

Pulmonary function testing

- FEV1 2.4 l (predicted value 2.3)
- FVC 2.6 l (predicted value 4.8)
- FEV1/FVC ratio 92%
- TLCO transfer factor 86% of predicted value

What is the most likely diagnosis?

	Pulmonary hypertension
	Pulmonary tuberculosis
	Pulmonary fibrosis secondary to methotrexate
	Extrinsic allergic alveolitis (EAA)
	Pulmonary fibrosis secondary to ankylosing spondylosis

Dashboard

Overall score: 0%

1 -

□ Question 176 of 200



A 58-year-old smoker was referred to the respiratory outpatient clinic by his GP with a history of progressively worsening shortness of breath. His symptoms started several months ago with shortness of breath on extreme exertion but he gradually developed shortness of breath with minimal activity. He also complained of increasing tiredness and a non-productive cough had lost approximately 3 pounds in 6 months. He denied the presence of sputum production, haemoptysis or chest pain, and also denied the presence of both orthopnoea and paroxysmal nocturnal dyspnoea. He had a past medical history comprising ankylosing spondylosis diagnosed 30 years ago as well as hypertension and hypercholesterolaemia. His drug history comprised naproxen 500mg BD, lansoprazole 30mg OD, felodipine M/R 2.5mg OD and atorvastatin 20mg OD. He stated that he had been trialled with a course of methotrexate a few years ago for his ankylosing spondylosis and was subsequently stopped.

Examination revealed the presence of a well male with a blood pressure of 146/86 mmHg, heart rate 74 bpm and respiratory rate of 18/min. His oxygen saturations were 93% on air. There was no BCG scar seen on examination of his arm. Examination of his respiratory system revealed the presence of bilateral fine upper zone crackles but nil else and no respiratory distress. Examination of his cardiovascular system revealed no abnormalities including a normal JVP and the absence of pedal oedema, and examination of his gastrointestinal system was likewise unremarkable.

Initial investigations revealed the following:

Hb	166 g/l
Platelets	341 * 10 ⁹ /l
WBC	6.3 * 10 ⁹ /l
ESR	34 mm/hr
CRP	26 mg/l

Chest x-ray: Bilateral apical fibrosis

Pulmonary function testing

- FEV1 2.4 l (predicted value 2.3)
- FVC 2.6 l (predicted value 4.8)
- FEV1/FVC ratio 92%
- TLCO transfer factor 86% of predicted value

What is the most likely diagnosis?

	Pulmonary hypertension
	Pulmonary tuberculosis
	Pulmonary fibrosis secondary to methotrexate
	Extrinsic allergic alveolitis (EAA)
	Pulmonary fibrosis secondary to ankylosing spondylosis

Dashboard

Overall score: **0%**
1 -

Question 176 of 200



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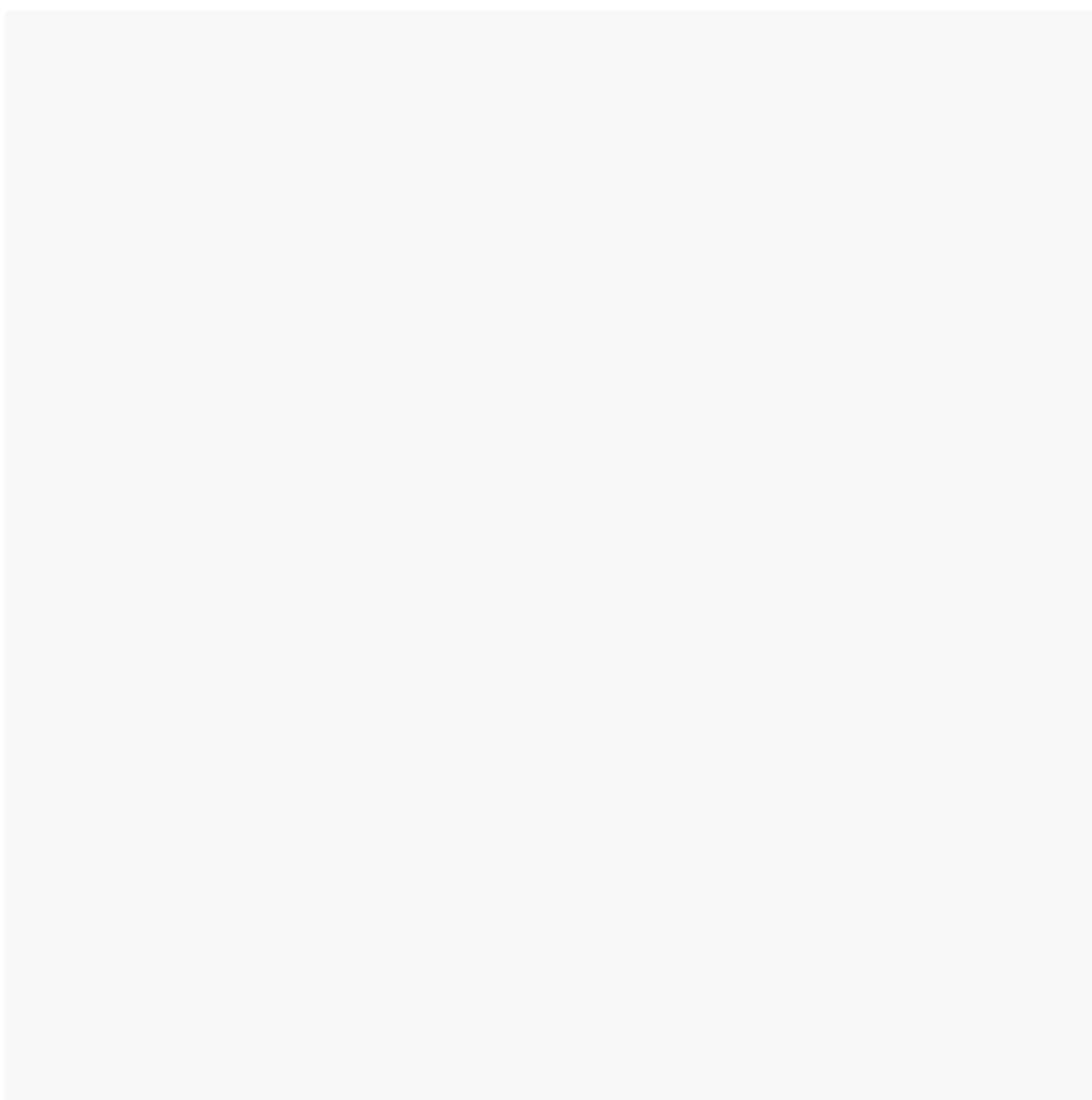
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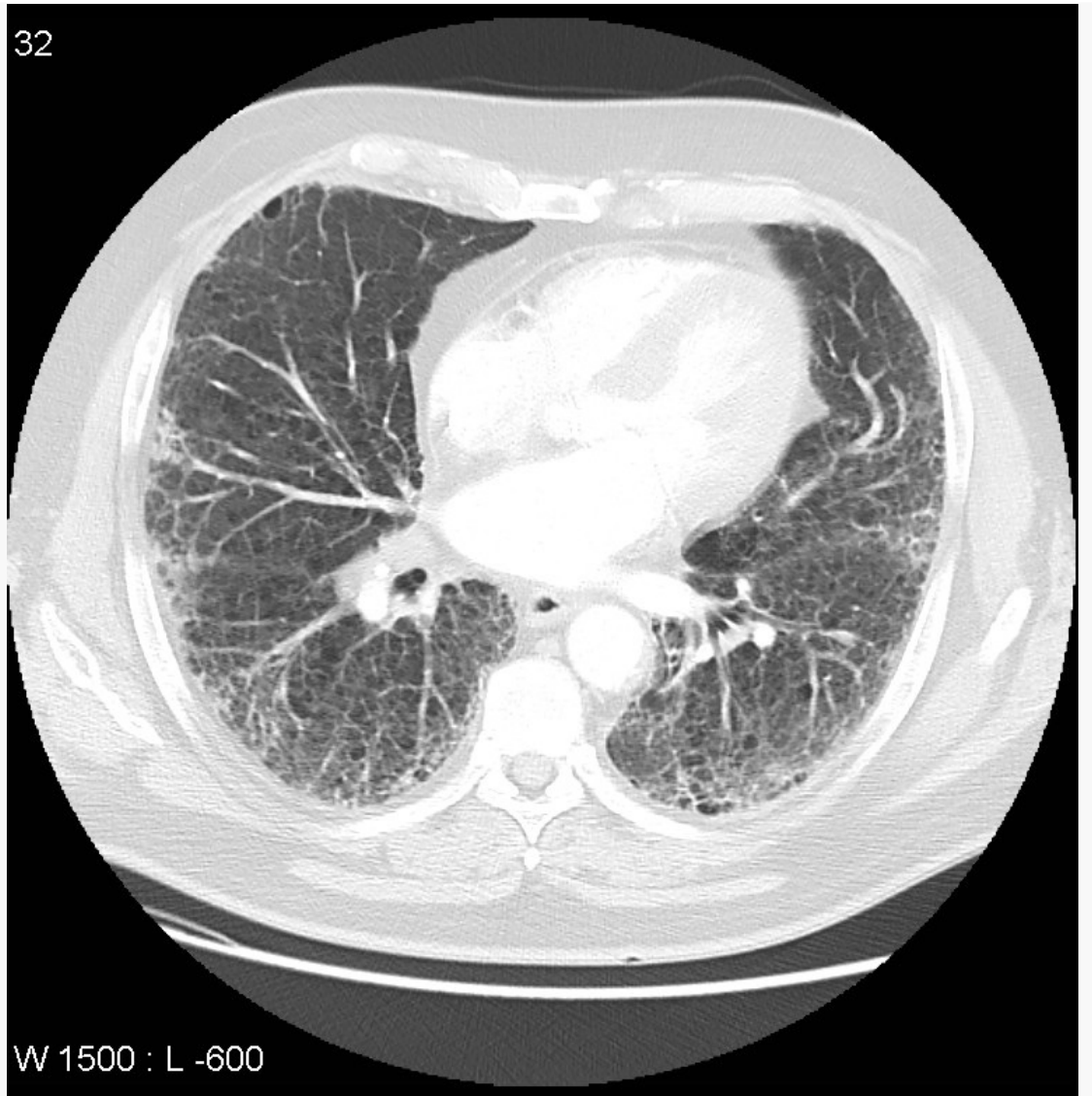
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	Pulmonary fibrosis secondary to methotrexate
	Extrinsic allergic alveolitis (EAA)
	Pulmonary fibrosis secondary to ankylosing spondylosis

Dashboard

Overall score: 0%

1 -





□ Question 177 of 200

□ □

A 72-year-old man presents with a chronic cough. This has been getting gradually worse for the past 3 months. On around five occasions he has coughed up some blood stained sputum. His past medical history includes ischaemic heart disease (NSTEMI 4 years ago), spinal stenosis and tuberculosis (treated 50 years ago). He drinks 20 units of alcohol per week and has a 55 pack-year history of smoking.

On examination scattered crackles are noted in both lung fields, but are more prominent on the left.

A chest x-ray is requested:



© Image used on license from Radiopaedia



What is the most likely underlying diagnosis?

	Aspergilloma
	Reactivated tuberculosis
	Lung cancer
	Histoplasmosis
	Lung abscess

Dashboard

Overall score: 0%

1 -

□ Question 177 of 200

□ □

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© Image used on license from Radiopaedia



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	Aspergilloma
	Reactivated tuberculosis
	Lung cancer
	Histoplasmosis
	Lung abscess

Dashboard

Overall score: **0%**

1 -

Question 178 of 200

A 51 year-old man is referred by her GP to the respiratory outpatient clinic. He has had several episodes of sinusitis over the past three years and is currently being referred to plastic surgery as the bridge of his nose has partially collapsed. A chest X-ray that was performed three weeks ago show five nodules and blood tests reveal a urea of 11.6 mmol/l and a creatinine of 198 μ mol/l.

Which of the following is the most appropriate initial treatment for this condition?

	Methotrexate
	Cyclophosphamide
	Azathioprine
	Corticosteroids
	Cyclophosphamide and corticosteroids

Dashboard

Overall score: 0%

1 -

Question 178 of 200

□ □

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Dashboard

Overall score: **0%**

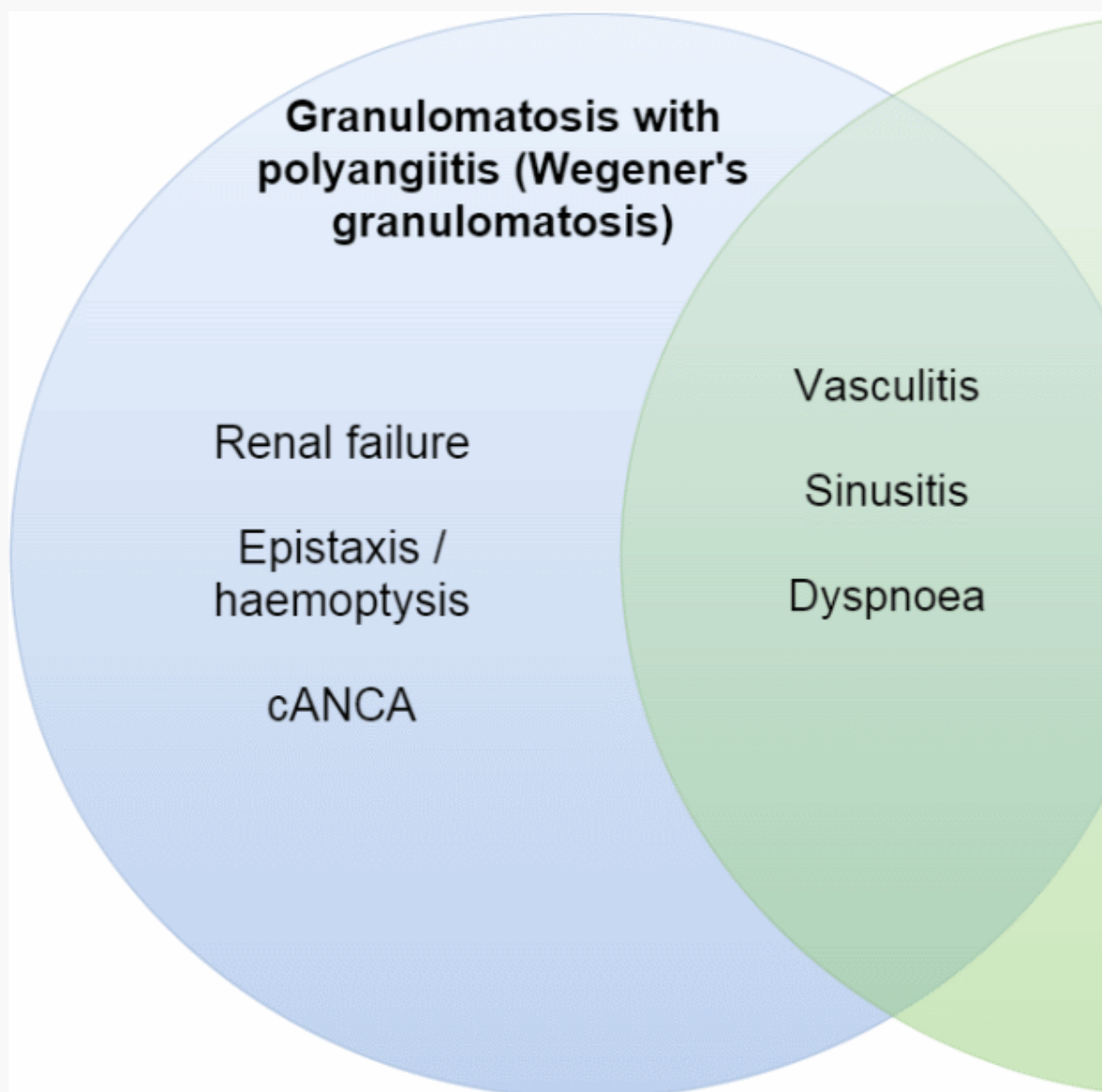
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Question 178 of 200

A 51 year-old man is referred over the past three years and has collapsed. A chest X-ray shows consolidation in the right upper lobe. His urea is 10 mmol/l and a creatinine of 1.2 mg/dl.

Which of the following is the most appropriate treatment?

<input type="radio"/>	Methotrexate
<input type="radio"/>	Cyclophosphamide
<input type="radio"/>	Azathioprine
<input type="radio"/>	Corticosteroids
<input checked="" type="radio"/>	Cyclophosphamide and corticosteroids



Dashboard

Overall score: **0%**

1 -

□ Question 178 of 200

□ □

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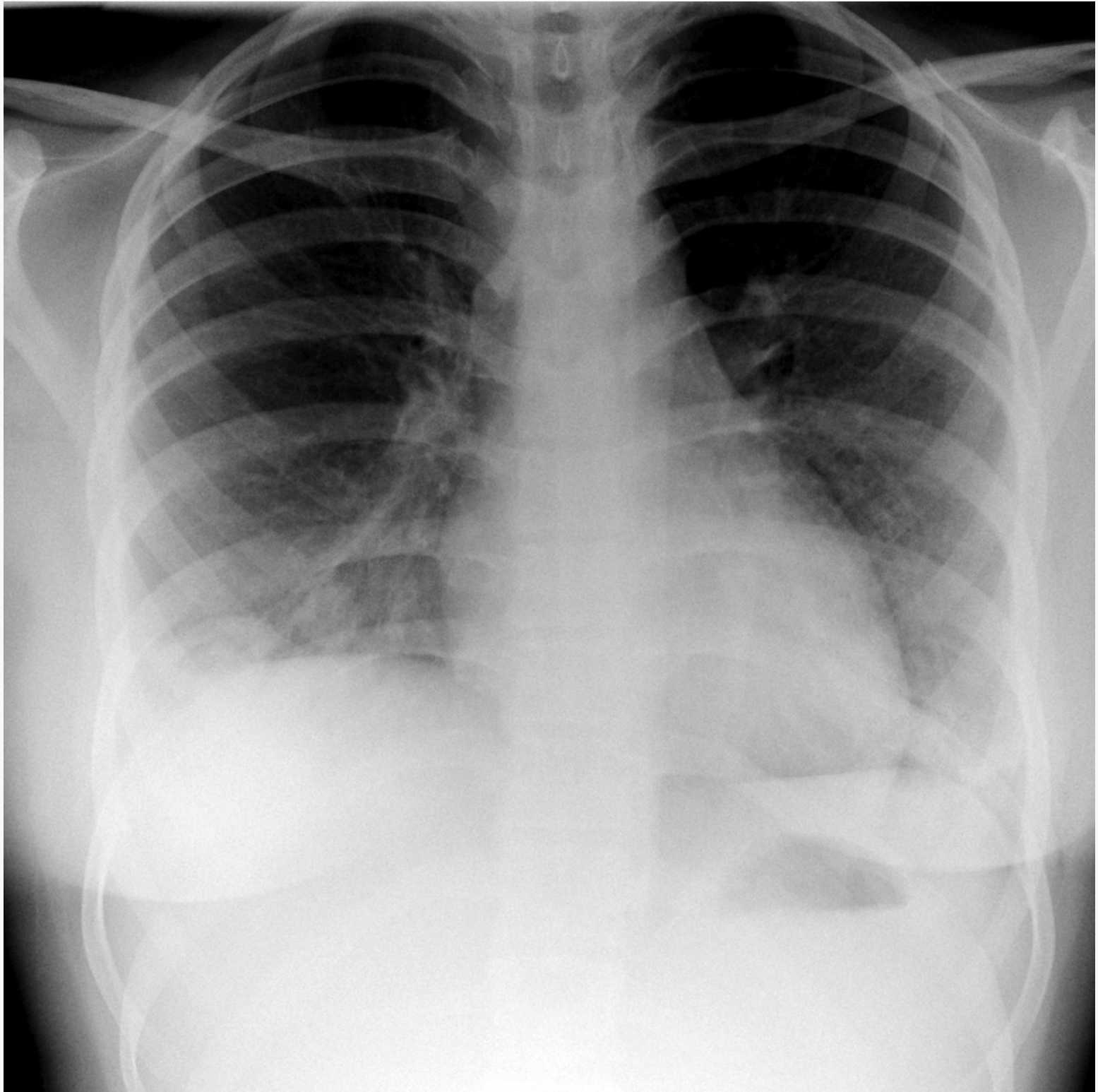
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	Methotrexate
	Cyclophosphamide
	Azathioprine
	Corticosteroids
	Cyclophosphamide and corticosteroids

Dashboard

Overall score: 0%

1 -



□ Question 178 of 200

□ □

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	Methotrexate
	Cyclophosphamide
	Azathioprine
	Corticosteroids
	Cyclophosphamide and corticosteroids

Dashboard

Overall score: 0%

1 -



Question 179 of 200

□ □

A 66 year-old gentleman with a diagnosis of chronic obstructive pulmonary disease (COPD) is reviewed in respiratory clinic. He complains of persistent breathlessness on exertion. There is no significant history of cough.

Pulmonary function testing reveals:

SpO ₂	90%
FVC	2.8L
FEV ₁	1.47 (40% predicted)
FEV ₁ /FVC ratio	53%

The patient is currently prescribed a short-acting alpha-2 agonist along with a combination inhaler containing a long-acting beta-2 agonist and corticosteroid. What is the most appropriate additional medication?

	Inhaled tiotropium
	Oral modified-release aminophylline
	Short-acting muscarinic agonist
	Oral prednisolone
	Oral roflumilast

Dashboard

Overall score: 0%

1 -

Question 179 of 200

□ □

A 66 year-old gentleman with a diagnosis of chronic obstructive pulmonary disease (COPD) is reviewed in respiratory clinic. He complains of persistent breathlessness on exertion. There is no significant history of cough.

Pulmonary function testing reveals:

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FVC	2.8L
FEV1	1.47 (40% predicted)
FEV1/FVC ratio	53%

The patient is currently prescribed a short-acting alpha-2 agonist along with a combination inhaler containing a long-acting beta-2 agonist and corticosteroid. What is the most appropriate additional medication?

	Inhaled tiotropium
	Oral modified-release aminophylline
	Short-acting muscarinic agonist
	Oral prednisolone
	Oral roflumilast

Dashboard

Overall score: **0%**

1 -

Question 180 of 200

□ □

A 78-year-old man with Chronic Obstructive Pulmonary Disease is reviewed in Respiratory clinic. He is complaining of decreased exercise tolerance with shortness of breath at rest. He suffers from exacerbations infrequently and does not have a productive cough. Oxygen saturations on air are 90%. His FEV 1 is 27% predicted.

He has a past medical history of osteoarthritis, ischaemic heart disease and chronic kidney disease.

His medications include Paracetamol, Ramipril, Aspirin, inhaled long acting beta agonist with inhaled corticosteroid and inhaled long acting muscarinic agonist. He has previously undergone pulmonary rehabilitation. He does not smoke

Investigations:

Hb	19.8 g/dL
WCC	$6.0 \times 10^9/l$
Platelets	$180 \times 10^9/l$
MCV	88fL

Echocardiogram: No abnormality seen.

CT Chest: Widespread mild bullous disease throughout upper and lower lung fields.

Arterial blood gas on air:

	Current	Four weeks previously
pH	7.40	7.37
pCO ₂	5.1 kPa	4.7 kPa
pO ₂	7.5 kPa	7.4 kPa
HCO ₃	25 mmol/l	24 mmol/l

What is the most appropriate treatment?

	Lung volume reduction surgery
	Mucolytic therapy
	Long term antibiotic prophylaxis
	Oral corticosteroids
	Long term oxygen therapy

Dashboard

Overall score: 0%

1 -

Question 180 of 200

□ □

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	Mucolytic therapy
	Long term antibiotic prophylaxis
	Oral corticosteroids
	Long term oxygen therapy

Dashboard

Overall score: **0%**
1 -

Question 181 of 200

□ □

A 63-year-old man is commenced on anti-tuberculosis therapy, after presenting hospital with a history of several months of weight loss, shortness of breath and a productive cough which was sometimes accompanied by haemoptysis. A chest x-ray had revealed apical consolidation and sputum was positive for acid-fast bacilli, thus a diagnosis of tuberculosis was then made. His only past medical history includes a diagnosis of asthma for which he takes PRN salbutamol and seretide (25 micrograms of salmeterol and 125 micrograms of fluticasone propionate) inhaler twice daily.

A week after being diagnosed, he is admitted to the acute medical unit with shortness of breath and bilateral expiratory wheeze. His observations reveal a temperature of 37.1°C, respiratory rate of 27 breaths per minute and oxygen saturations of 94% on room air. Oxygen is commenced via a face mask. A chest x-ray reveals the same hilar consolidation as before, with no new features.

What is the most appropriate next step in her treatment?

	Continue the tuberculosis medication at current dose and increase the steroid dose
	Continue the tuberculosis medication at current dose and decrease the steroid dose
	Reduce the tuberculosis medication and increase the steroid dose
	Stop the tuberculosis medication and increase the steroid dose
	Continue the tuberculosis medication at current dose and keep the steroid dose the same

Dashboard

Overall score: 0%

1 -

Question 181 of 200

□ □

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	Stop the tuberculosis medication and increase the steroid dose
	Continue the tuberculosis medication at current dose and keep the steroid dose the same

Dashboard

Overall score: **0%**

1 -

Question 182 of 200

□ □

A 29-year-old man presents to his GP with shortness of breath. This has been occurring for the past 6 months and is sometimes accompanied by wheezing, particularly later on during the day. He does not have any past medical history and occasionally takes over-the-counter antihistamines for hay-fever. His only recent travel history is a holiday to Greece, where he found he was less short of breath and he was less wheezy. His only family history of note is his mother who died of a heart attack aged 65. He works as a car mechanic and smokes 5 roll-up cigarettes per day and drinks on average 5-6 units of alcohol per week.

Examination of the chest is normal with good air entry bilaterally and no added sounds. Heart sounds I and II are present with no obvious murmurs.

What is the most useful investigation in determining this man's diagnosis?

	Chest x-ray
	Peak expiratory flow rate measurements at both home and at work
	Pulmonary function testing
	Serum IgE measurement
	Skin prick testing

Dashboard

Overall score: 0%

1 -

Question 182 of 200

□ □

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	Pulmonary function testing
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	Skin prick testing

Dashboard

Overall score: **0%**

1 -

Question 183 of 200

□ □

A 27-year-old woman with brittle asthma presents to the Emergency department. She is managed with high dose salmeterol/fluticasone and montelukast but reports steadily worsening symptoms since starting with a cold some 48hrs earlier. She has been admitted to the intensive care unit on 3 previous occasions. On examination her blood pressure is 122/82 mmHg pulse rate is 88 beats per minute. On auscultation of her chest you hear quiet breath sounds with polyphonic wheeze, her respiratory rate is 30/min. She is given back to back salbutamol nebulisers, ipratropium nebulisers, and IV hydrocortisone. These interventions only lead to minimal improvement in her PEFR from 110 to 140, (330 predicted). Oxygen saturation is 92% measured by pulse oximeter, on 60% oxygen delivered via mask. You call the anaesthetist for possible intubation.

Which of the following is the most appropriate next step?

	IV aminophylline
	IV chlorpheniramine
	IV magnesium
	IV salbutamol
	IV omalizumab

Dashboard

Overall score: 0%

1 -

Question 183 of 200

□ □

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	IV chlorpheniramine
	IV magnesium
	IV salbutamol
	IV omalizumab

Dashboard

Overall score: **0%**

1 -

Question 184 of 200

A 71-year-old woman is referred by her GP to the rapid access chest clinic with progressive shortness of breath and reduced exercise tolerance over 3 months and a chronic productive cough. When asked about her past medical history she states that she has had some pain for the past month or so in her left shoulder, which has been present at a constant level. She has been taking paracetamol and codeine for the pain which helps slightly. Otherwise, the patient has moderate COPD, for which she taken ipratropium bromide and salmeterol and mechanical back pain. She has a 15 year pack-history and drinks 1-2 units of alcohol per day.

Examination reveals some wasting of the hypothenar eminence of the left hand, although the chest sounds clear bilaterally with no added sounds. Heart sounds 1 and 2 are present with no murmurs.

What would be the most useful investigation following a chest x-ray?

<input type="checkbox"/>	Electromyogram studies
<input type="checkbox"/>	Computed tomography of the thorax
<input type="checkbox"/>	Bronchoscopy
<input type="checkbox"/>	Myeloma screen
<input type="checkbox"/>	Sputum microscopy, culture and sensitivity

Dashboard

Overall score: 0%

1 -

Question 184 of 200

□ □

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	Myeloma screen
	Sputum microscopy, culture and sensitivity

Dashboard

Overall score: **0%**

1 -

Question 185 of 200



A 72-year-old gentleman presents with a five month history of dry cough and worsening shortness of breath on exertion. He undergoes extensive investigations and is diagnosed with idiopathic pulmonary fibrosis.

Bloods performed as part of the diagnostic work up show:

Hb	141 g/l
Platelets	$255 \times 10^9/l$
WBC	$5.2 \times 10^9/l$
ESR	32 mm/h

Na ⁺	139 mmol/l
K ⁺	3.6 mmol/l
Urea	4.7 mmol/l
Creatinine	92 μ mol/l
CRP	15 mg/L

His lung function tests show a forced vital capacity (FVC) of 65% of predicted.

On examination the patient has obvious finger clubbing and fine end-inspiratory crepitations on auscultation of the chest.

Of note in his past medical history he smoked for ten years between the ages of 20 and 30.

He is understandably very distressed by the diagnosis and asks about potential therapies. He is enrolled on a pulmonary rehabilitation programme but is keen to try a pharmacological therapy. Which drug should be considered in this patient?

	Azathioprine
--	--------------

	Prednisolone
	Bosentan
	Pirfenidone
	Sildenafil

Dashboard

Overall score: **0%**
1 -

□ Question 185 of 200



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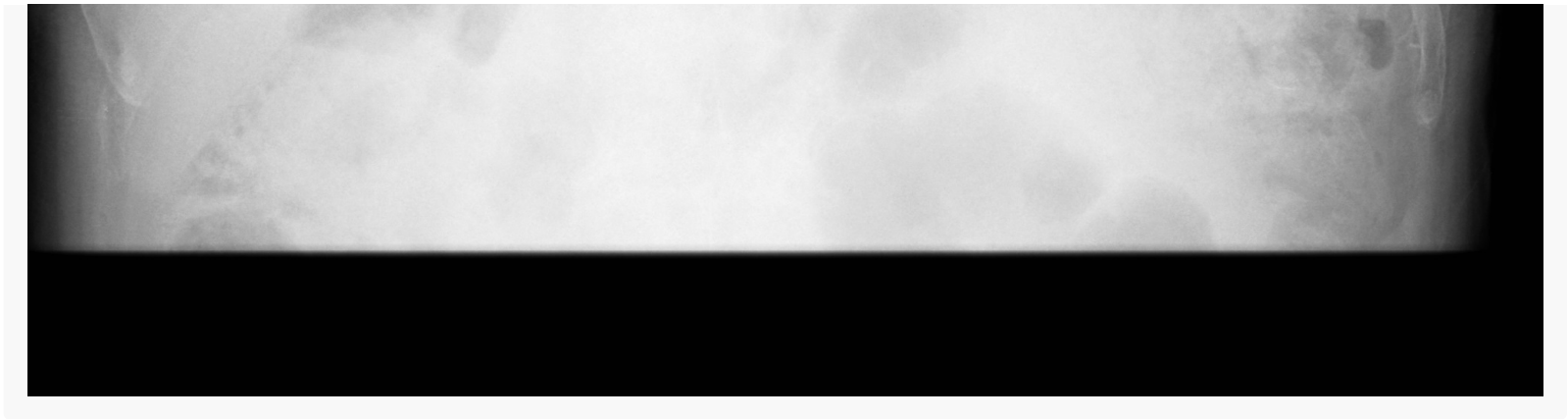
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□ Question 185 of 200

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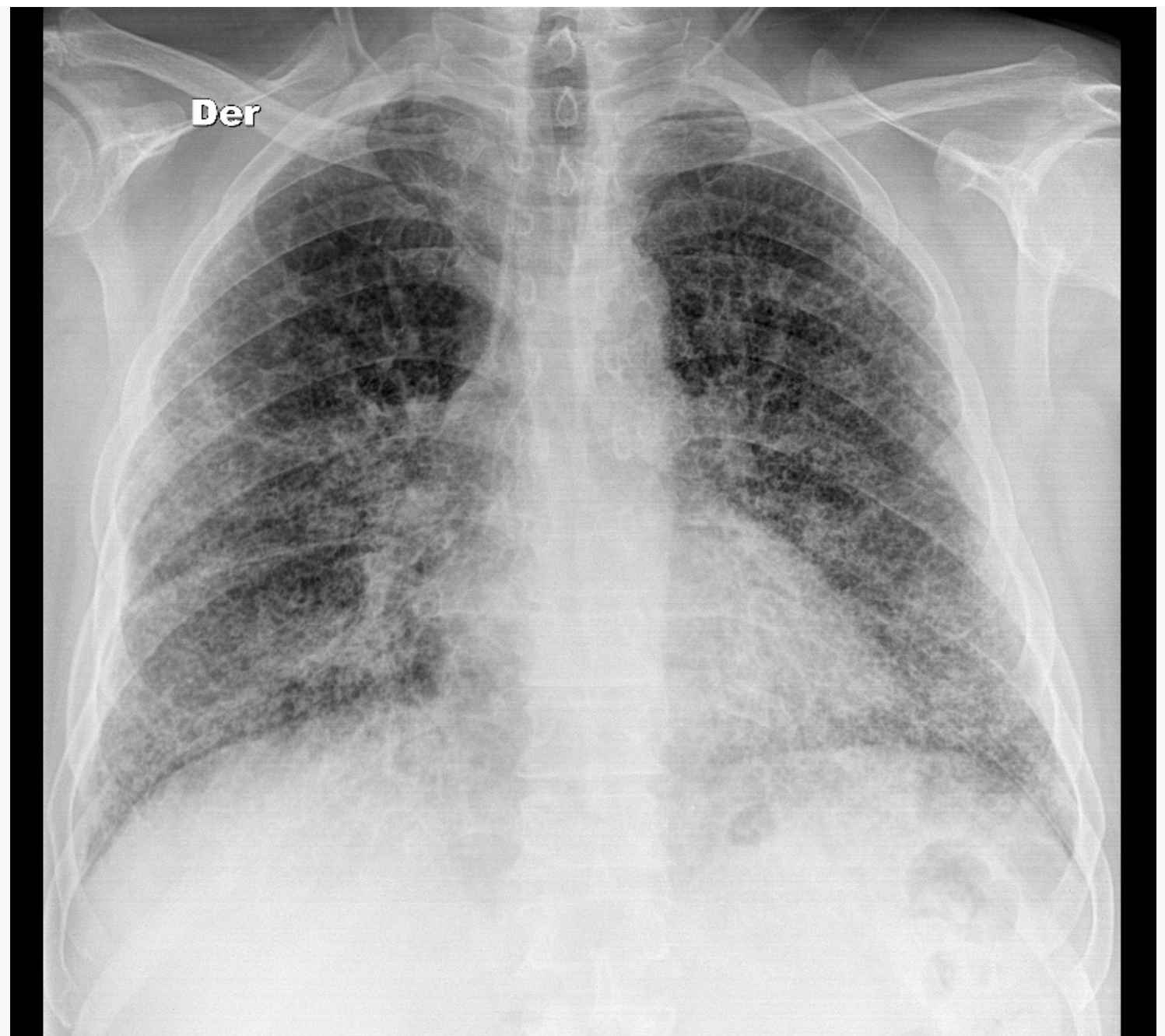
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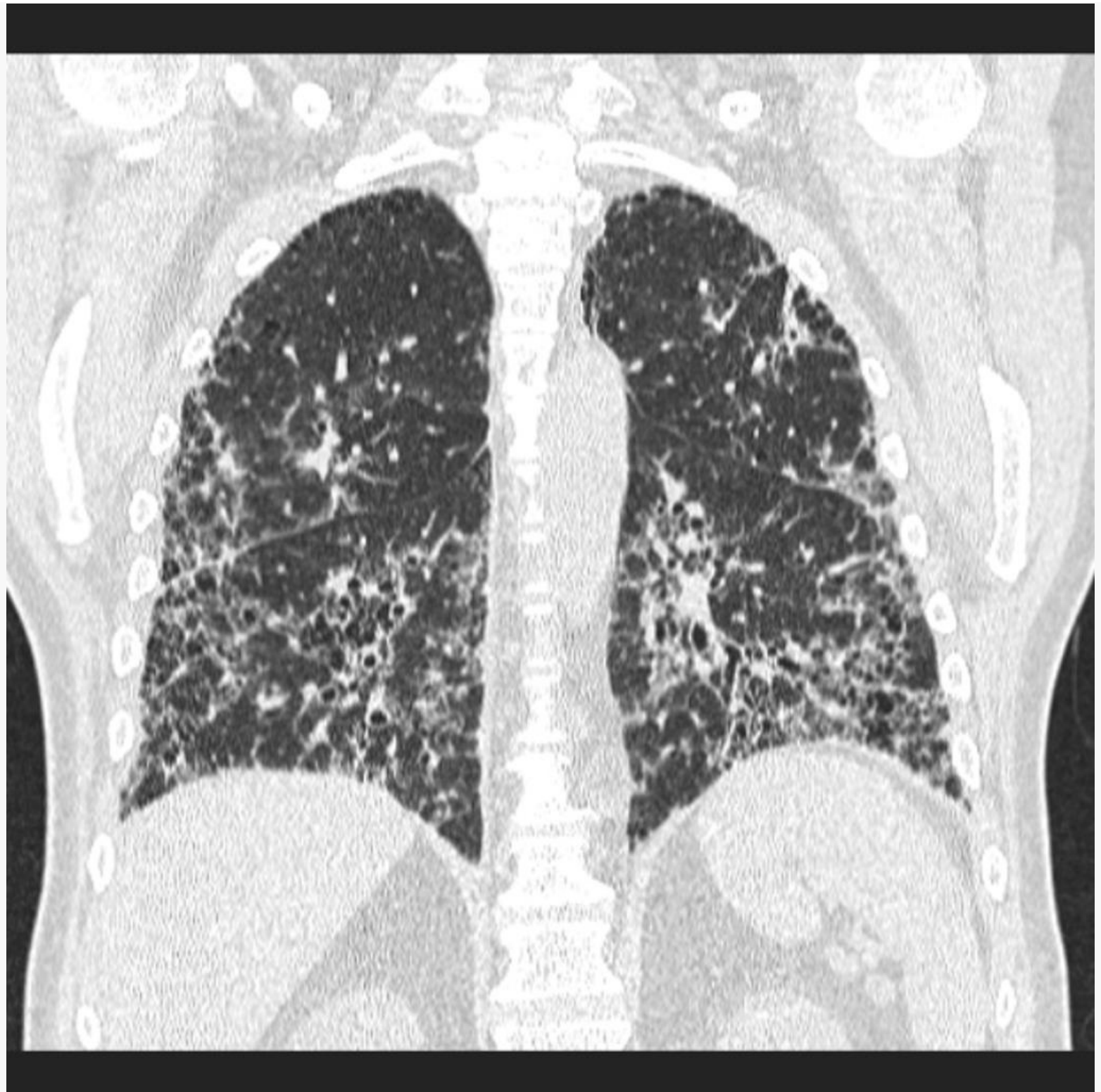
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Platelets	255 * 10 ⁹ /l
WBC	5.2 * 10 ⁹ /l
ESR	32 mm/h

Na ⁺	139 mmol/l
K ⁺	3.6 mmol/l
Urea	4.7 mmol/l
Creatinine	92 µmol/l
CRP	15 mg/L

His lung function tests show a forced vital capacity (FVC) of 65% of predicted.

On examination the patient has obvious finger clubbing and fine end-inspiratory crepitations on auscultation of the chest.

Of note in his past medical history he smoked for ten years between the ages of 20 and 30.

He is understandably very distressed by the diagnosis and asks about potential therapies. He is enrolled on a pulmonary rehabilitation programme but is keen to try a pharmacological therapy. Which drug should be considered in this patient?

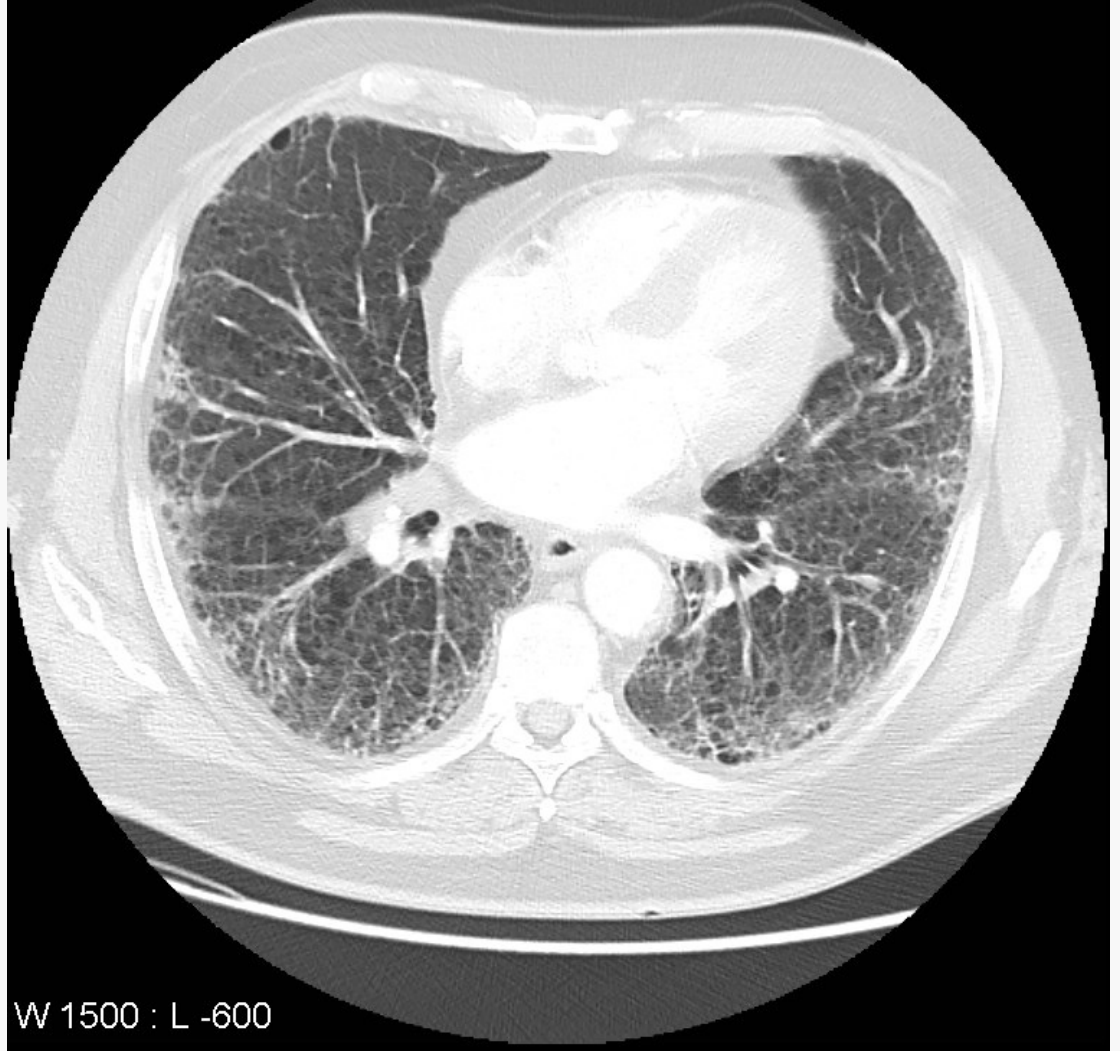
	Azathioprine
	Prednisolone
	Bosentan
	Pirfenidone
	Sildenafil

Dashboard

Overall score: 0%

1 -

32



W 1500 : L -600

Question 186 of 200

A 27-year-old lady was admitted to the Emergency Department due to acute shortness of breath. She had been completely normal that morning. Her sister mentioned that this was not the first time she had suffered such an attack and she improved every time after staying in hospital for a couple of hours and taking some nebulisers. The patient is not known to have any medical condition. Her father is on long term prednisone tablets and nebulisers for chronic obstructive pulmonary disease.

On examination: blood pressure 123/86 mmHg, pulse rate 110/min, respiratory rate 35/min. Oxygen saturation 98%. The chest was clear with good air entry.

Blood investigations showed:

Hb	128 g/l
Platelets	320 * 10 ⁹ /l
WBC	8 * 10 ⁹ /l
Na ⁺	137 mmol/l
K ⁺	4.2 mmol/l
Urea	6 mmol/l
Creatinine	100 µmol/l

A 3-month-old pulmonary function test was normal.

What is the next step in management?

<input type="checkbox"/>	Discharge home
<input type="checkbox"/>	Refer to repeat pulmonary function tests
<input type="checkbox"/>	Nijmegen questionnaire
<input type="checkbox"/>	

	Serial ECG
	Psychiatric review

Dashboard

Overall score: **0%**

1 -

Question 186 of 200

□ □

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What is the next step in management?

	Discharge home
	Refer to repeat pulmonary function tests
	Nijmegen questionnaire

	Serial ECG
	Psychiatric review

Dashboard

Overall score: **0%**
1 -

□ Question 187 of 200



A 28-year-old presents to Accident and Emergency with symptoms of increasing shortness of breath, wheeze and a cough.

This is her first hospital attendance with asthma which is usually well controlled. She has a past medical history of perennial rhinitis.

She has no known drug allergies and takes beclomethasone (200 micrograms inhaled twice a day) and salbutamol which she rarely uses. She has never smoked

On examination her respiratory rate is 24, her pulse is 98 bpm and has widespread wheeze on auscultation of her chest. Her oxygen saturations on air are 93%. She is quiet, anxious and seems disoriented.

Blood tests reveal a raised white cell count of $11 \times 10^9/L$, her chest x-ray is normal.

She is started on nebulised salbutamol and ipratropium bromide and given an oral dose of prednisolone.

An arterial blood gas is taken 5 minutes after being started on 40% oxygen:

pH	7.36
PaO ₂	16.0 kPa
PaCO ₂	5.98 kPa
Bicarbonate	19 mmol/l

What would be the most appropriate next step?

	Secure a cannula and give 200mg of hydrocortisone IV
	Start empirical antibiotics
	Magnesium infusion

	Arrange a review by an anaesthetists/intensivist
	Repeat an arterial blood gas after 10 minutes

Dashboard

Overall score: **0%**

1 -

Question 187 of 200



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Dashboard

Overall score: **0%**

1 -

Question 188 of 200

A 22-year-old second generation British Pakistani is seen by the Tuberculosis (TB) Specialist Nurse as part of the contact tracing service. Her mother has recently been diagnosed with active TB after presenting to the respiratory clinic with a 3-month history of night sweats, weight loss, and haemoptysis.

The patient is clinically well and denies any focal symptomatology. Her past medical history is unremarkable and she is a non-smoker. She studies full-time at university but continues to live at home with her extended family. She was fully immunised as a child.

On examination, she is afebrile. Her respiratory rate is 16/min and her oxygen saturations are 97% breathing room air. There is no cervical lymphadenopathy, her chest is clear and her abdomen is soft and non-tender.

A Mantoux test is performed and read 72 hours later, at which time a 7mm area of induration is noted lying within a 16mm area of erythema. An interferon-gamma release assay (IGRA) is requested. What does a positive IGRA indicate?

	Latent TB or prior immunisation
	Latent TB
	Prior immunisation
	Active or latent TB
	Active TB or prior immunisation

Dashboard

Overall score: 0%

1 -

Question 188 of 200

□ □

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Dashboard

Overall score: **0%**

1 -

Question 188 of 200

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The patient is clinically well and denies any focal symptoms. She is a non-smoker. She studies full-time at university but was not immunised as a child.

On examination, she is afebrile. Her respiratory rate is 18/min. There is no cervical lymphadenopathy, her chest is clear.

A Mantoux test is performed and read 72 hours later showing a 16mm area of erythema. An interferon-gamma release assay is also performed.



	Latent TB or prior immunisation
	Latent TB
	Prior immunisation
	Active or latent TB
	Active TB or prior immunisation

Dashboard

Overall score: 0%

1 -

Question 189 of 200

□ □

Mrs Stevens is a 60-year-old lady with pulmonary fibrosis secondary to dermatomyositis. She returns to your clinic seven weeks after being commenced on high dose steroids due to disease progression. During the review Mrs Stevens describes increasing shortness of breath, which is worse when she exerts herself. She has not noticed any fever and has not lost any weight. She has a chronic cough productive of white sputum. This remains stable.

On examination she looks comfortable at rest and auscultation of her chest is surprisingly clear. At rest her oxygen Sats are 97%. You ask her to walk to the end of the corridor and back. You notice that on returning her Sats have fallen to 82%. You request an urgent chest radiograph, which is reported as showing bilateral patchy infiltrates.

What is the most appropriate management option?

	Fluconazole
	Ambisome
	Co-trimoxazole
	Ribavirin
	Stop steroids

Dashboard

Overall score: 0%

1 -

Question 189 of 200

□ □

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1 -

□ Question 189 of 200

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Dashboard

Overall score: 0%

1 -

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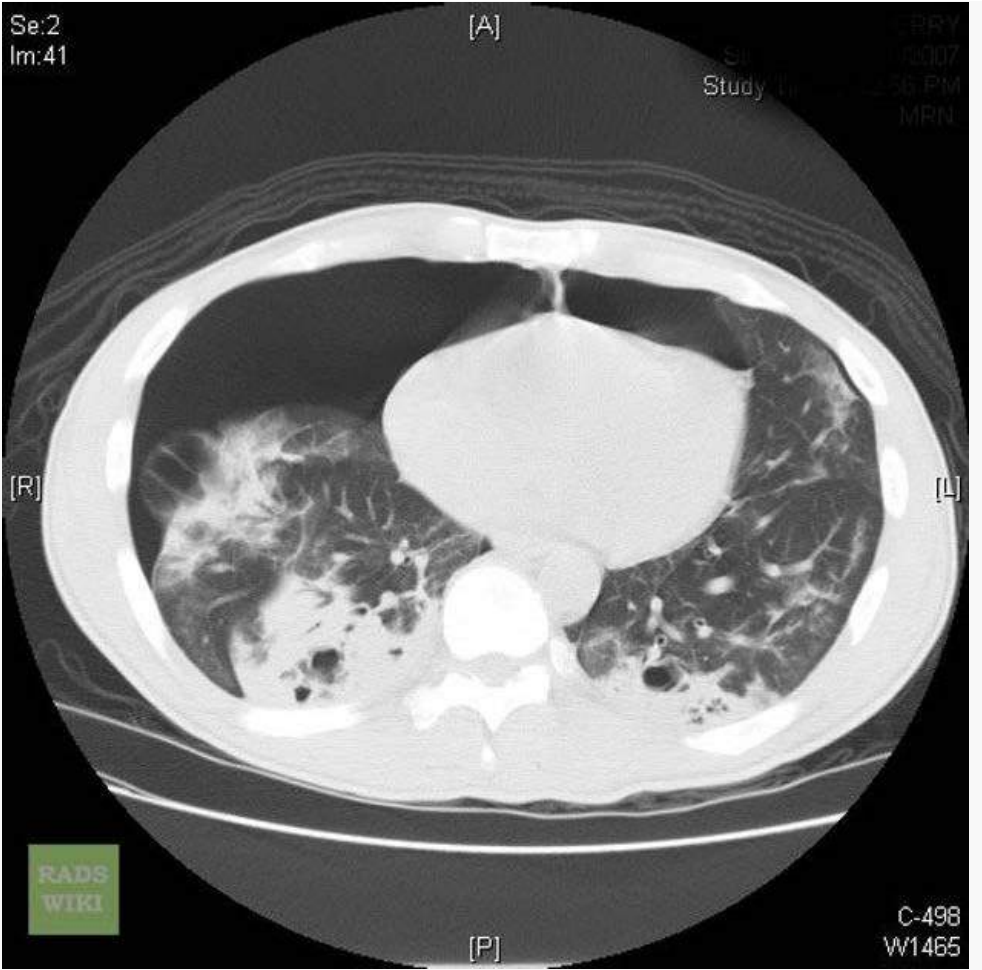
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C-498
W1465



Question 190 of 200

□ □

A 28-year-old man is referred by A&E to the acute medical team. He is a Swedish student studying for his PhD at the local university. He complains of a 6-week history of a non-productive cough associated with fevers. He denies haemoptysis or weight but admits that his exercise tolerance has reduced over the same period. He also reports pains in his knees, ankles and wrists and some painful red swellings on his legs. He admits to having had these before several years ago but they went away without any medical treatment and left no scars. He denies any bowel symptoms. On examination, he is afebrile and cardiovascularly stable. His respiratory rate is 18 at rest and his saturations are 96% on air. He has no palpable lymphadenopathy and his respiratory examination is normal, as is cardiovascular and abdominal examinations. His shins have bilateral tender red nodules on them.

His bloods results done by A&E are:

Hb	145 g/l
Platelets	$365 \times 10^9/l$
WBC	$9.1 \times 10^9/l$
Neuts	$5.1 \times 10^9/l$

Na ⁺	140 mmol/l
K ⁺	4.2 mmol/l
Urea	5.4 mmol/l
Creatinine	82 μ mol/l

Bilirubin	4 μ mol/l
ALP	59 u/l
ALT	23 u/l
Albumin	43 g/l
CRP	5 mg/l

Adjusted calcium	2.65 mmol/l
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His chest x-ray shows bilateral hilar lymphadenopathy with some small bilateral pulmonary infiltrates.

He goes on to have a CT chest which confirms the above findings. A bronchoscopy is performed which is normal and transbronchial biopsies of the hilar lymph nodes show non-caseating granulomas.

What is the most appropriate treatment for this gentleman?

	Prednisolone
	NSAIDs
	R-CHOP
	Methotrexate
	Nothing

Dashboard

Overall score: **0%**

1 -

Question 190 of 200

□ □

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Dashboard

Overall score: **0%**

1 -

Question 191 of 200

A 65 year-old woman presents with a 7 month history of shortness of breath. She also has a cough, which is predominantly non-productive. Despite three course of antibiotics from her general practitioner, her symptoms have worsened. She now struggles to climb the stairs without getting breathless and has had to take early retirement from work. She is still able to sleep lying flat and does not wake up at night feeling breathless.

She has systemic sclerosis, which was diagnosed in her twenties. She is under the rheumatology team for this, and has been taking ibuprofen and nifedipine for the last 3 years with good symptomatic control. She also has allergic rhinitis. She is a current smoker of 10 cigarettes a day and started smoking when she was 20. She was treated for latent tuberculosis as a child, but is unable to recall any treatment details.

Heart rate- 90 beats per minute

Blood pressure- 130/80 mmHg

Respiratory rate- 20 breathes per minute

Oxygen saturations- 93% on room air

Temperature- 37.4°C

Hb	115 g/l	Na ⁺	140 mmol/l
Platelets	350 * 10 ⁹ /l	K ⁺	3.7 mmol/l
WBC	11.5 * 10 ⁹ /l	Urea	7.5 mmol/l
Neuts	7.5 * 10 ⁹ /l	Creatinine	100 µmol/l
CRP	10 mg/l		

What is the most likely diagnosis?

	Lung carcinoma
	Chronic obstructive pulmonary disease
	Primary pulmonary hypertension

	Pulmonary fibrosis
	Acute interstitial pneumonitis

Dashboard

Overall score: **0%**

1 -

Question 191 of 200

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Dashboard

Overall score: **0%**
1 -

Question 191 of 200



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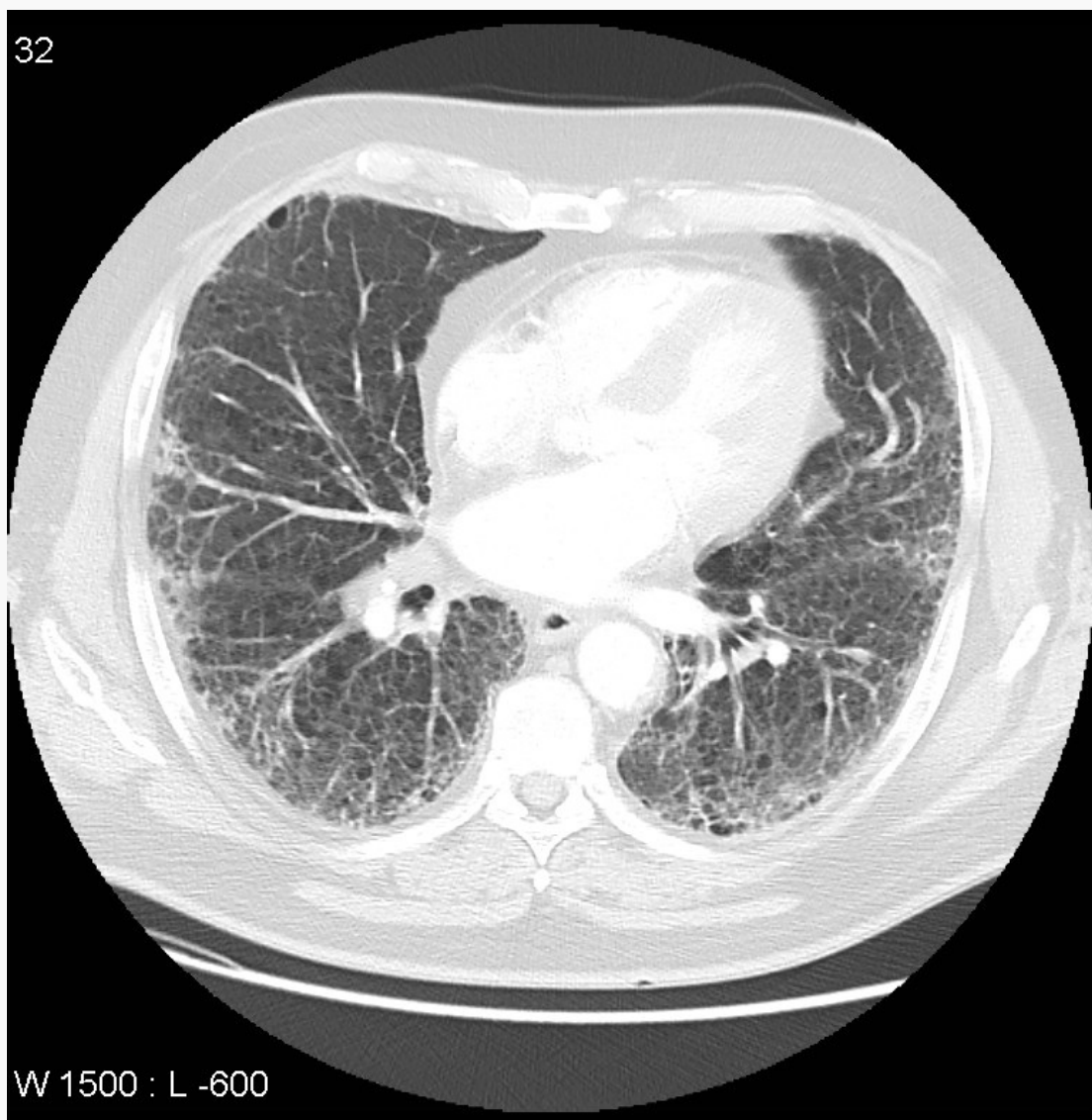
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	Chronic obstructive pulmonary disease
	Primary pulmonary hypertension
	Pulmonary fibrosis
	Acute interstitial pneumonitis

Dashboard

Overall score: 0%

1 -

32



Question 192 of 200

A 25-year-old man is reviewed prior to discharge. He was admitted to hospital one day ago with a small pneumothorax. As it was <1cm in size he was treated with high flow oxygen and he admitted for observations over 24 hours. His symptoms have resolved and a repeat chest x-Ray shows complete resolution of the pneumothorax. What advice should he be given before discharge?

<input type="checkbox"/>	He should not dive for a year
<input type="checkbox"/>	He should never dive
<input type="checkbox"/>	He should not drive for four weeks
<input type="checkbox"/>	He should have no contact sport for four weeks
<input type="checkbox"/>	He should not fly for four weeks

Dashboard

Overall score: **0%**

1 -

Question 192 of 200

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	He should have no contact sport for four weeks
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Dashboard

Overall score: **0%**

1 -

Question 193 of 200

□ □

A 55-year-old woman is reviewed in respiratory clinic. She was referred GP following investigations for chronic progressive exertional breathlessness and found to have a restrictive pattern on spirometry with a reduced forced vital capacity. She has undergone a high-resolution CT scan of her chest which demonstrates ground-glass changes. Following clinical review, she is told that the most likely diagnosis is idiopathic pulmonary fibrosis. She is very keen to exclude any other cause; what is the most appropriate way of confirming the diagnosis?

	Open lung biopsy
	Broncho-alveolar lavage
	Video-assisted thoracoscopy (VATS)
	Trans-bronchial lung biopsy
	Measurement of serum ACE

Dashboard

Overall score: 0%

1 -

Question 193 of 200

□ □

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Dashboard

Overall score: **0%**

1 -

□ Question 193 of 200

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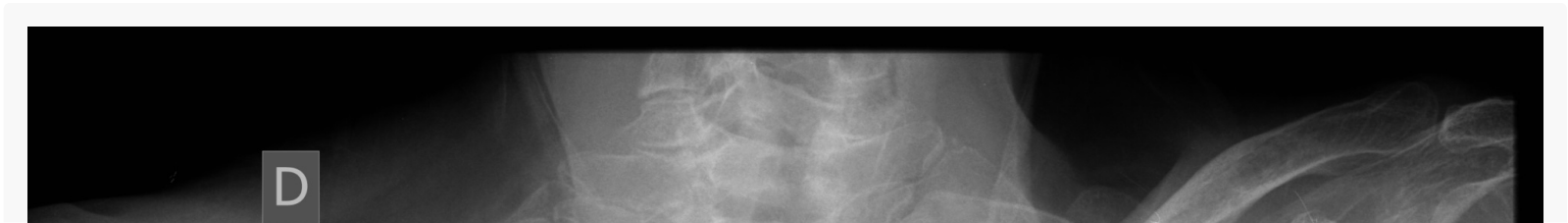
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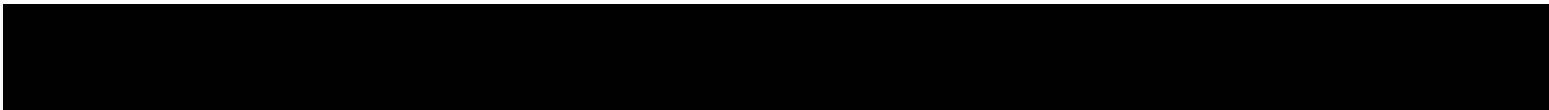
Dashboard

Overall score: 0%

1 -







□ Question 193 of 200

□ □

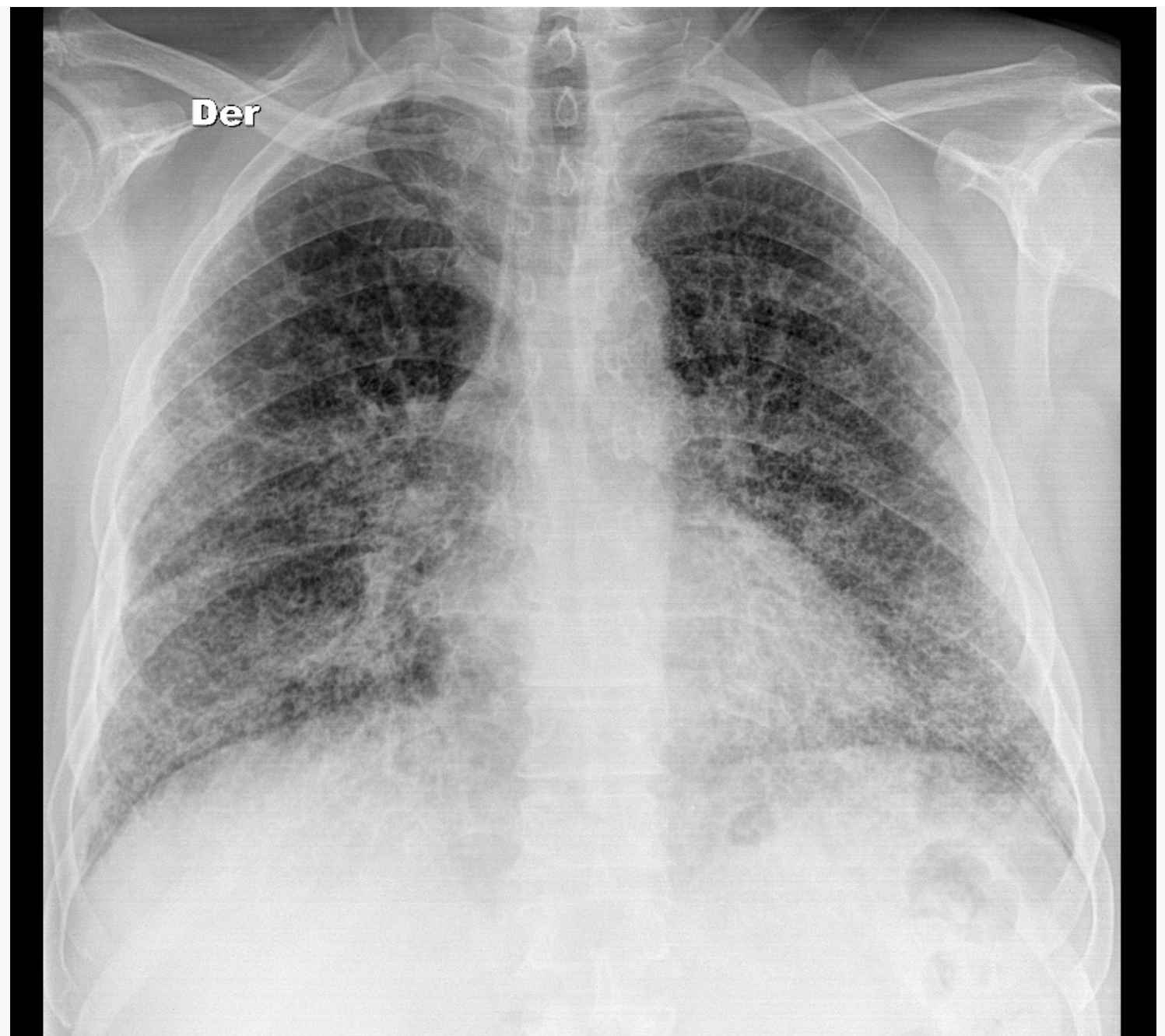
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Dashboard

Overall score: 0%

1 -



□ Question 193 of 200

□ □

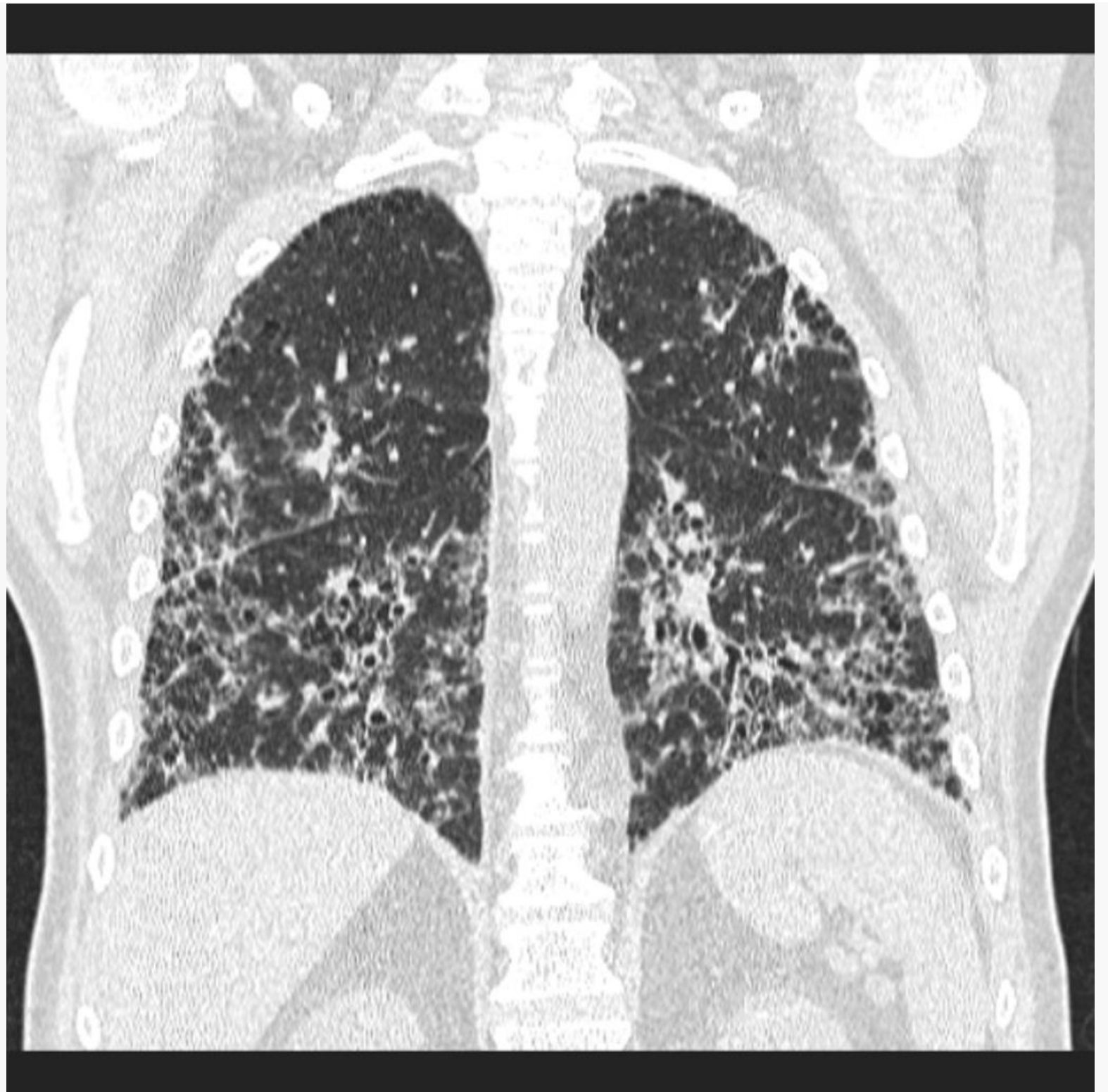
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1 -



Question 193 of 200

□ □

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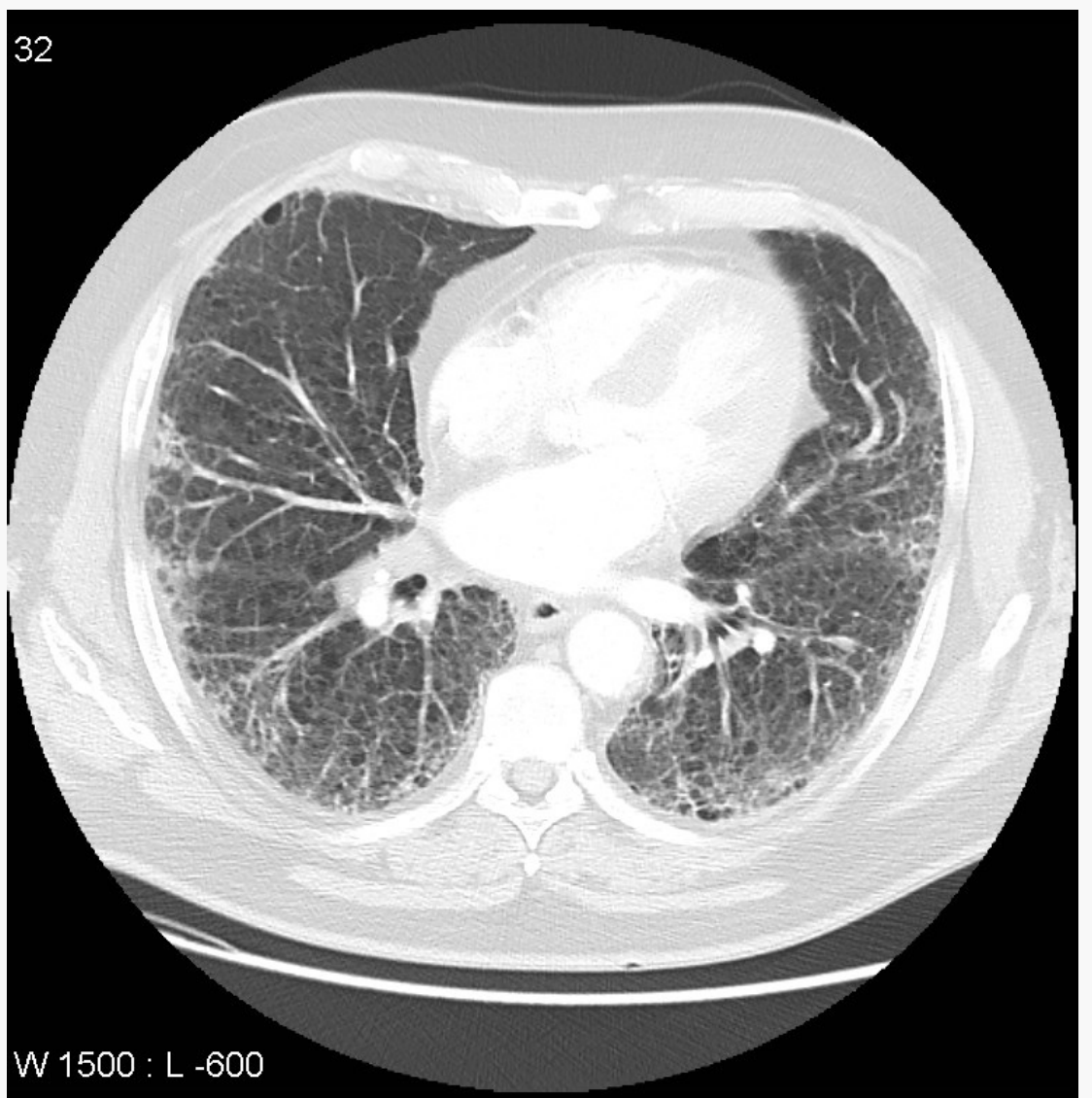
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Dashboard

Overall score: 0%

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32

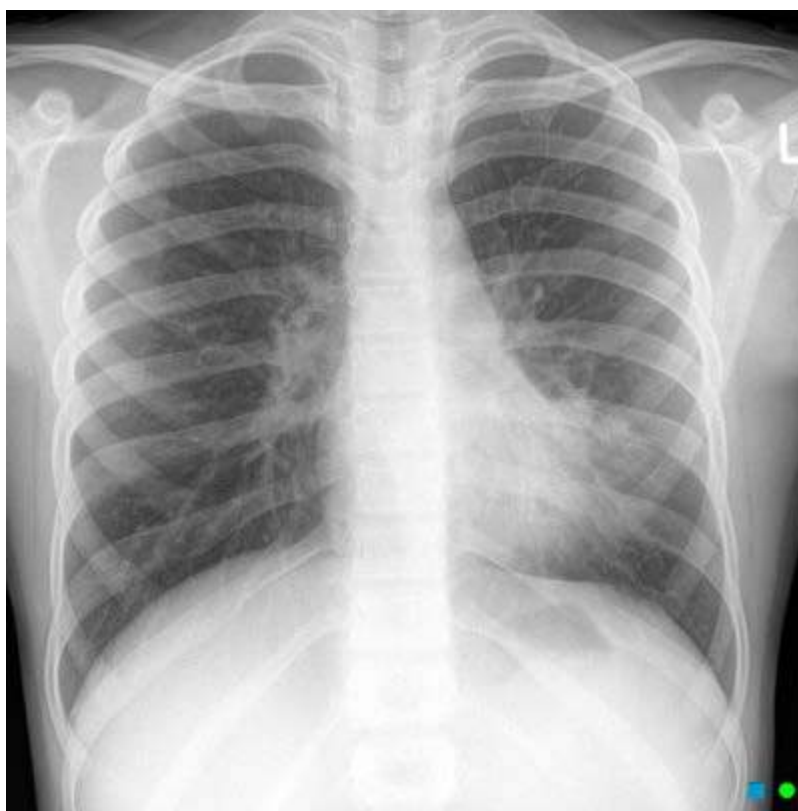


W 1500 : L -600

□ Question 194 of 200

□ □

An 11-year-old girl presents with a productive cough and fever. A chest x-ray is taken:



© Image used on license from Radiopaedia



What is the main finding on the x-ray?

	Bilateral pneumothoraces
	Left lingual consolidation
	Dilated cardiomyopathy with pulmonary oedema

	Left humeral head fracture
	Left middle lobe consolidation

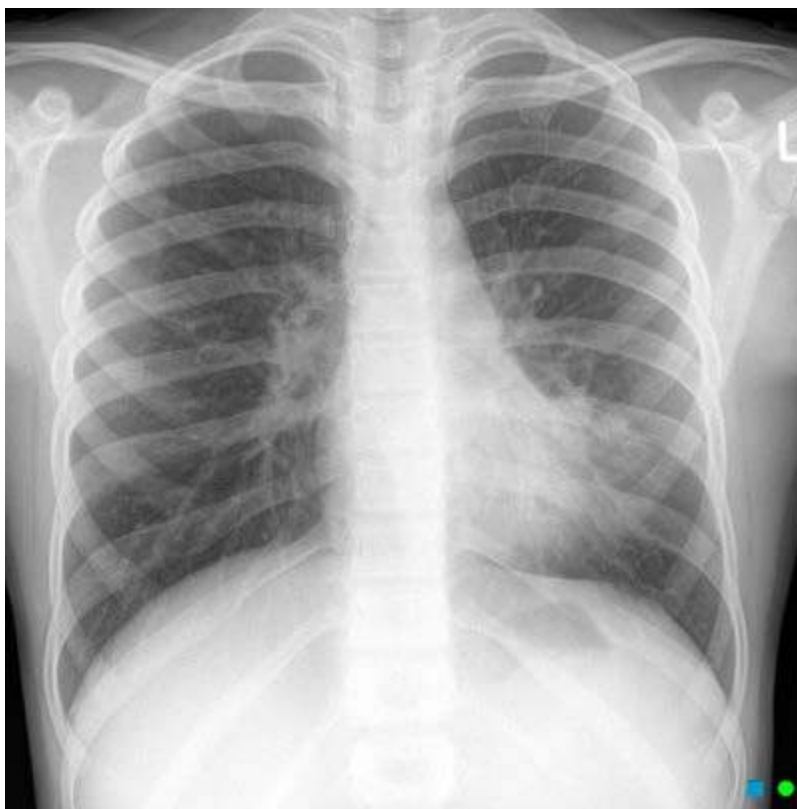
Dashboard

Overall score: **0%**
1 -

□ Question 194 of 200

□ □

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© Image used on license from Radiopaedia



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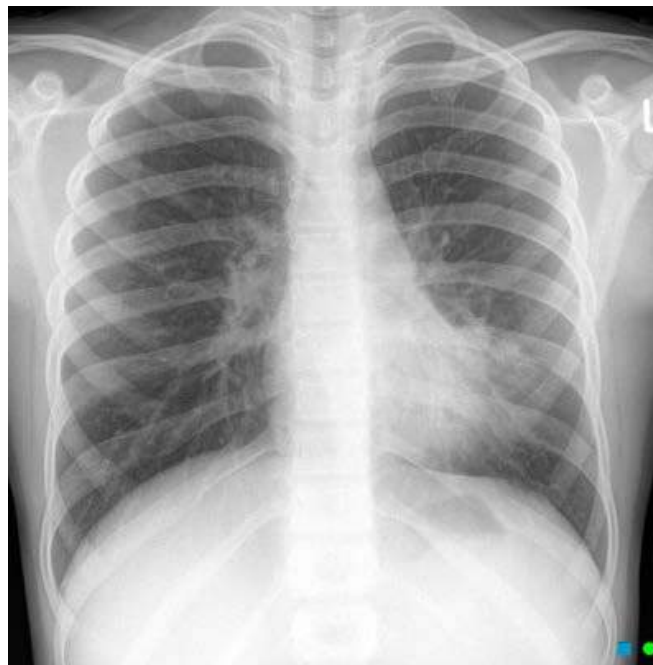
Dashboard

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1 -

Question 194 of 200

□ □

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© Image used on license from Radiopaedia

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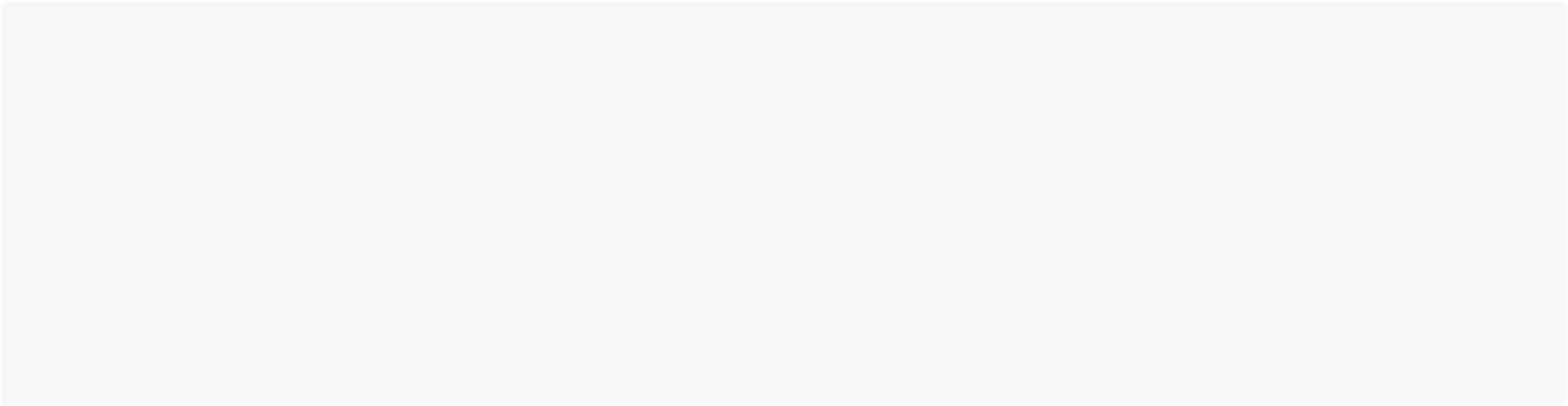
Bilateral pneumothoraces

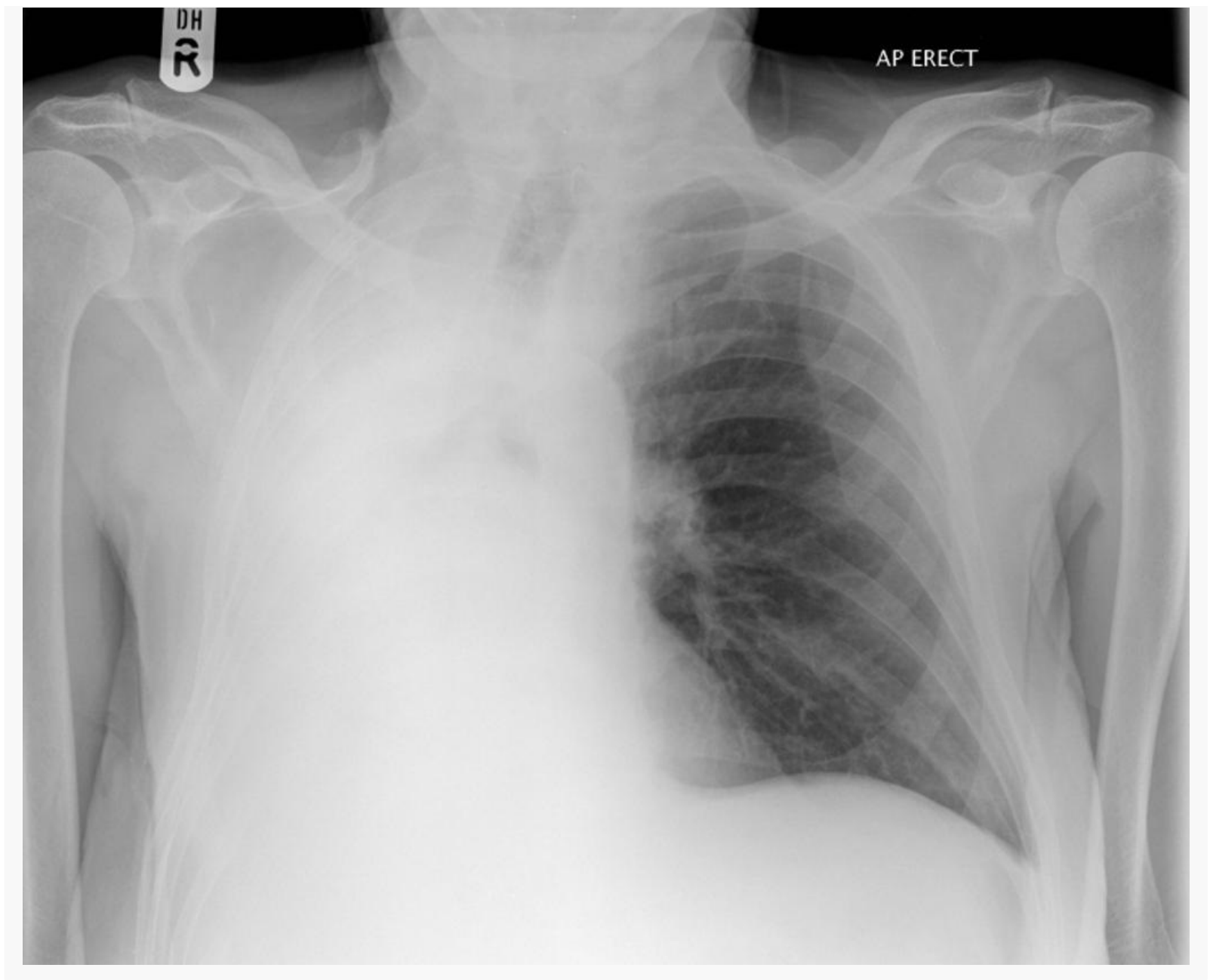
Left lingual consolidation

	Dilated cardiomyopathy with pulmonary oedema
	Left humeral head fracture
	Left middle lobe consolidation

Dashboard

Overall score: **0%**
1 -

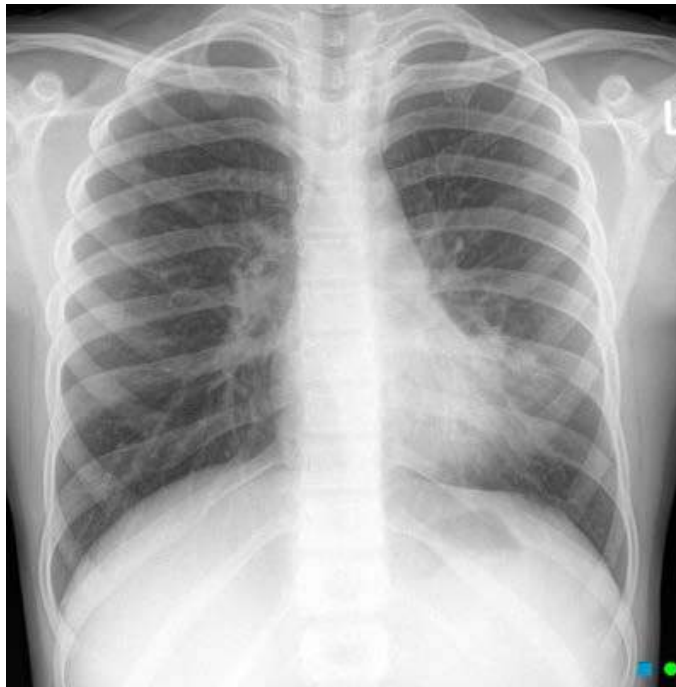




□ Question 194 of 200

□ □

An 11-year-old girl presents with a productive cough and fever. A chest x-ray is taken:



© Image used on license from Radiopaedia

What is the main finding on the x-ray?

Bilateral pneumothoraces

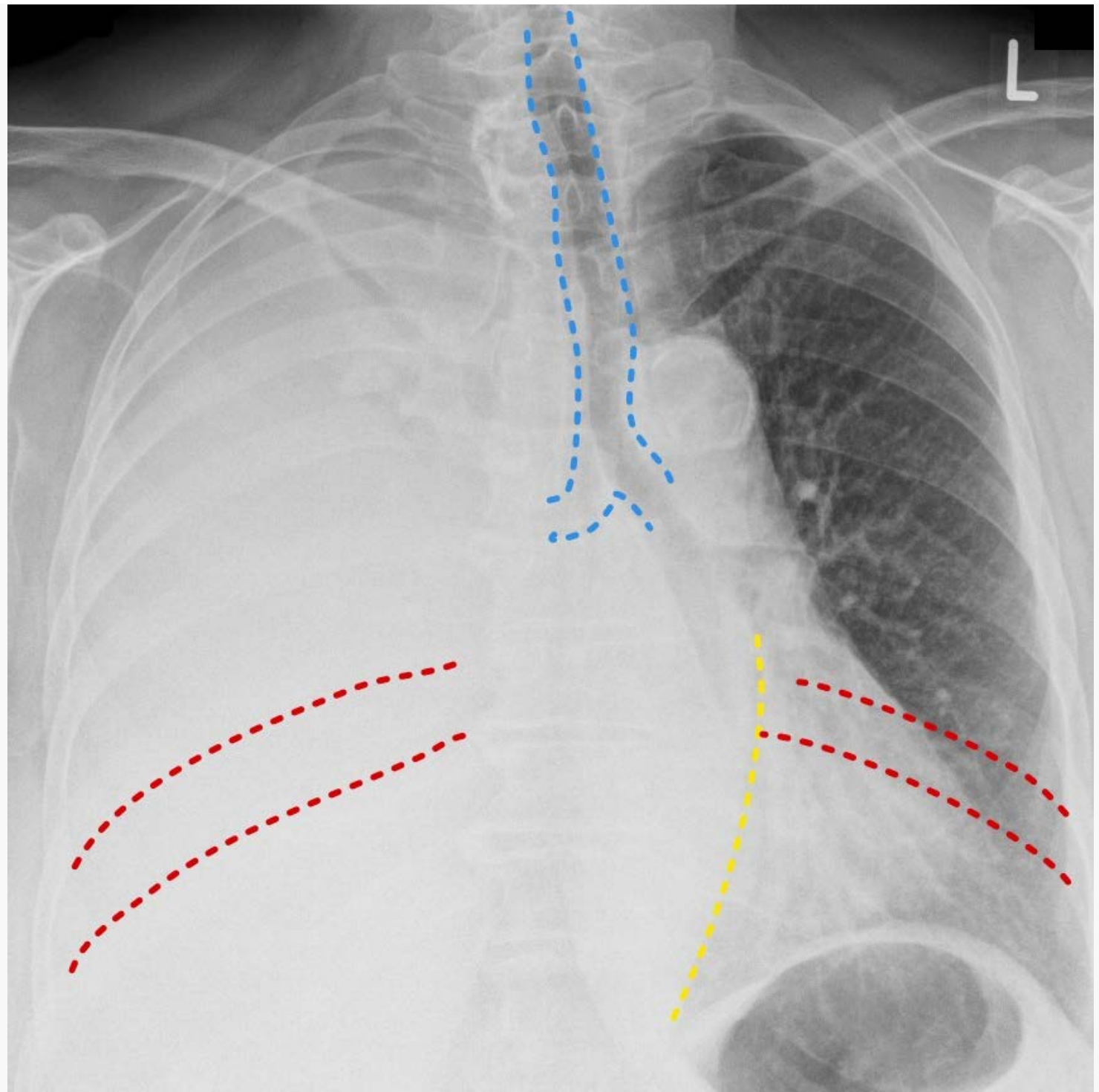
Left lingual consolidation

	Dilated cardiomyopathy with pulmonary oedema
	Left humeral head fracture
	Left middle lobe consolidation

Dashboard

Overall score: 0%

1 -



□ Question 195 of 200



A 71-year-old woman is referred by her out-of-hours GP service to the emergency department following her presentation with worsening shortness of breath and cough. The shortness of breath has been increasing in severity over the last 3 weeks and is associated by an occasional non-productive cough.

She has an extensive cardiac past medical history including two myocardial infarctions which were treated with percutaneous coronary intervention, an aortic heart valve replacement and mild mitral regurgitation. Other history includes hypertension which is treated with amlodipine and ramipril, hypercholesterolaemia which is treated with atorvastatin and mild COPD for which he takes salbutamol and ipratropium bromide. She previously worked as a librarian, has smoked 10 cigarettes for the past 20 years and drinks on average 5 units of alcohol per week.

Examination reveals dull percussion and reduced breath sounds over the left mid and lower bases of the lung. Urgent chest x-ray reveals a left-sided pleural effusion. Pleural aspirate is taken and shows:

Protein content	45 g/L
Glucose	2.4mmol/L
pH	7.32

What is the most likely diagnosis?

	Congestive cardiac failure
	Bronchial carcinoma
	Systemic lupus erythematosus
	Mesothelioma
	Boerhaave's syndrome

Overall score: **0%**

1 -

□ Question 195 of 200



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What is the most likely diagnosis?

	Congestive cardiac failure
	Bronchial carcinoma
	Systemic lupus erythematosus
	Mesothelioma
	Boerhaave's syndrome

Overall score: **0%**

1 -

□ Question 196 of 200

□ □

A 63-year-old asymptomatic South East Asian man was investigated for TB after his wife was diagnosed with active tuberculosis (TB). Investigations reveal positive Mantoux test, clear chest X-ray, negative sputum samples, normal full blood count and liver function tests. What is the best treatment for this man?

	2 months of isoniazid (with pyridoxine), rifampicin, pyrazinamide and ethambutol followed by 4 months of isoniazid (with pyridoxine) and rifampicin
	6 months of isoniazid (with pyridoxine) and rifampicin
	3 months of isoniazid (with pyridoxine) and rifampicin
	3 months of isoniazid (with pyridoxine), rifampicin, pyrazinamide, and ethambutol
	6 months of isoniazid (with pyridoxine), rifampicin and pyrazinamide

Dashboard

Overall score: 0%

1 -

Question 196 of 200

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<input type="radio"/>	2 months of isoniazid (with pyridoxine), rifampicin, pyrazinamide and ethambutol followed by 4 months of isoniazid (with pyridoxine) and rifampicin
<input type="radio"/>	6 months of isoniazid (with pyridoxine) and rifampicin
<input checked="" type="radio"/>	3 months of isoniazid (with pyridoxine) and rifampicin
<input type="radio"/>	3 months of isoniazid (with pyridoxine), rifampicin, pyrazinamide, and ethambutol
<input type="radio"/>	6 months of isoniazid (with pyridoxine), rifampicin and pyrazinamide

Dashboard

Overall score: **0%**

1 -

Question 197 of 200



A 25-year-old lady is admitted via the Emergency Department with shortness of breath, dry cough and wheeze. She has a past history of asthma and hayfever.

Her cough developed whilst on holiday in Cornwall a week ago. Since returning, she has visited her GP and been given a course of amoxicillin. She subsequently developed diarrhoea and headaches. None of her family has been unwell.

On examination she has saturations of 94% on air and a respiratory rate of 24/min. Her heart rate is 105/min and her blood pressure is 118/72 mmHg. Her temperature is 37.8 °C. She is able to complete sentences and her peak flow is 53% of her predicted. On auscultation she has right basal a crepitations and widespread wheeze. Her abdomen is soft and non-tender with normal bowel sounds. She has multiple soft, mildly enlarged cervical lymph nodes but no palpable nodes elsewhere.

Her chest x-ray shows a right basal consolidation.

Her blood tests are as follows:

Hb	120 g/l	Na ⁺	138 mmol/l	Bilirubin	4 µmol/l
Platelets	450 * 10 ⁹ /l	K ⁺	3.5 mmol/l	ALP	72 u/l
WBC	16 * 10 ⁹ /l	Urea	8 mmol/l	ALT	13 u/l
Neuts	14 * 10 ⁹ /l	Creatinine	82 µmol/l	CRP	35 mg/l

She is treated with salbutamol and ipratropium nebulisers, steroids and IV antibiotics.

Which test is most likely to reveal the causative organism?

	Blood cultures
	Legionella urinary antigen
	Mycoplasma serology

	Respiratory virus swab
	Sputum culture

Dashboard

Overall score: **0%**

1 -

Question 197 of 200



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Dashboard

Overall score: **0%**
1 -

Question 197 of 200

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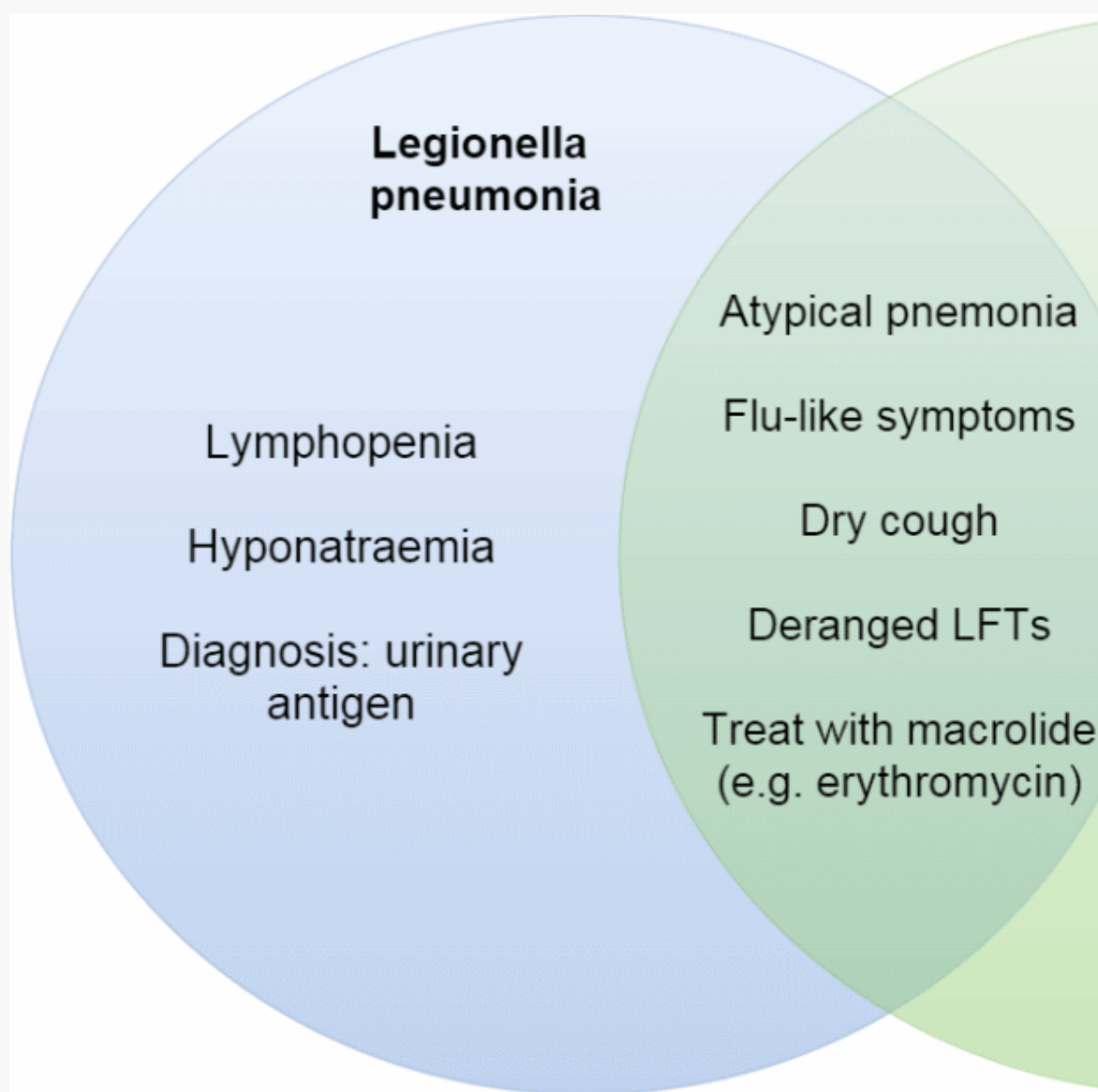
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<input type="radio"/>	Blood cultures
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<input checked="" type="radio"/>	Mycoplasma serology



	Respiratory virus swab
	Sputum culture

Dashboard

Overall score: **0%**
1 -

Question 198 of 200

□ □

A 74-year-old ex-miner is reviewed in the Respiratory Clinic with a 4-month history of episodic dyspnoea and dry cough. The attacks last for several days at a time and are accompanied by fever, malaise, and chest tightness. He recovered from the most recent episode 2 weeks ago.

His past medical history is unremarkable and he states that he is generally well between episodes. He does report some long-standing shortness of breath on exertion, but this has been stable for the past 6 years and he estimates his exercise tolerance at 200 yards.

He worked as a miner until the early 1980s and then retrained as a plumber. He continued to work until his retirement in the early 2000s. He now enjoys housing pigeons in his back garden. He does not smoke.

On examination, his respiratory rate is 14/min and his oxygen saturations are 95% breathing room air. His fingers are clubbed and there are bibasal crackles on auscultation of the chest. His heart sounds are dual with nil added.

A high-resolution CT (HRCT) scan of the thorax is reported as showing subpleural bibasal reticular opacities with some evidence of honeycombing but no appreciable ground-glass opacification.

What is the most likely cause of his symptoms?

	Asbestosis
	Hypersensitivity pneumonitis
	Silicosis
	Coal worker's pneumoconiosis
	Idiopathic pulmonary fibrosis

Overall score: **0%**

1 -

Question 198 of 200

□ □

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Question 198 of 200

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Question 198 of 200

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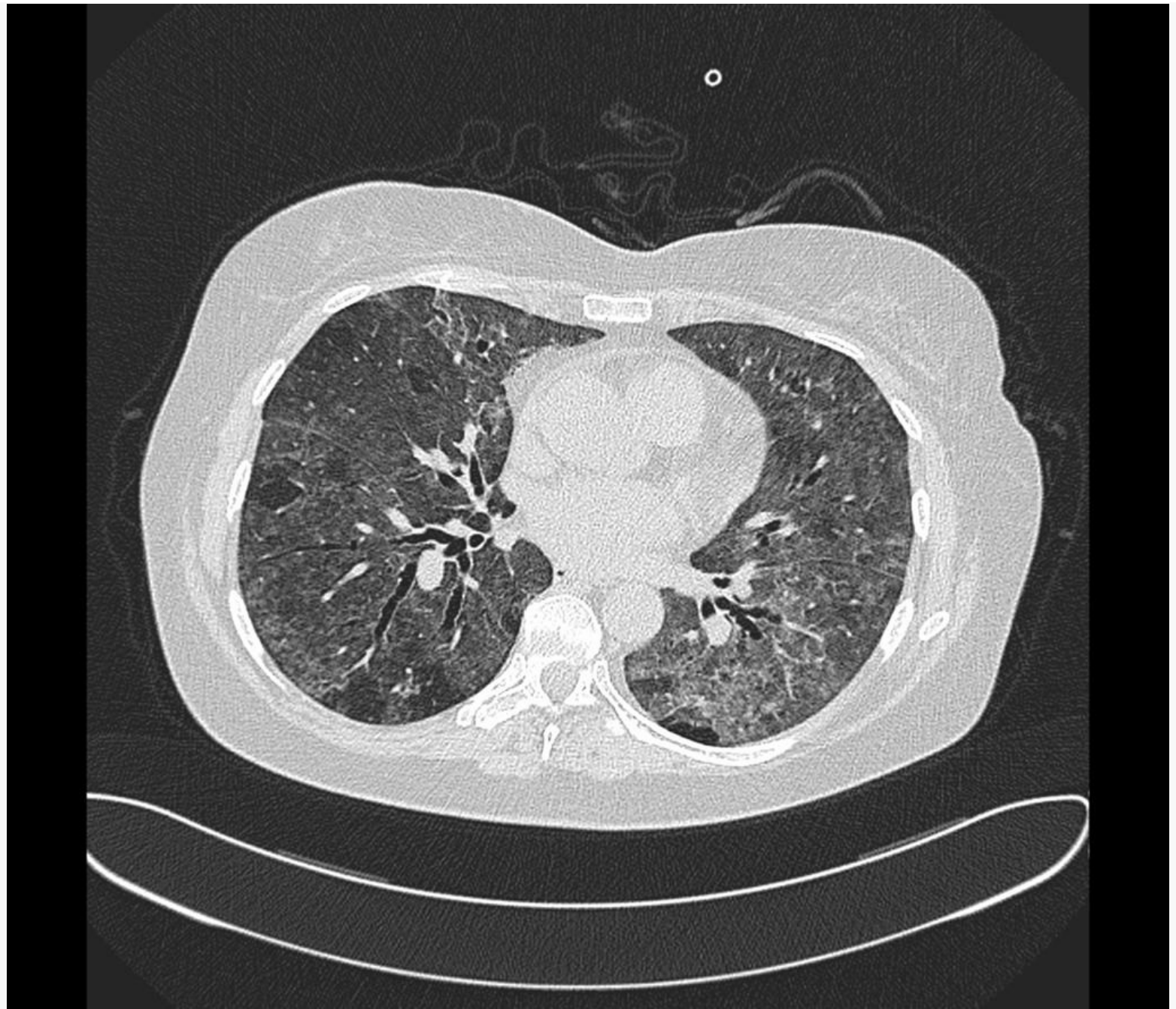
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	Silicosis
	Coal worker's pneumoconiosis
	Idiopathic pulmonary fibrosis

Dashboard

Overall score: 0%



Question 199 of 200

□ □

A 65-year-old gentleman with known chronic obstructive pulmonary disease presents to the Emergency Department with acute breathlessness. He is very dyspnoeic with a respiratory rate of 40 breaths per minute, oxygen saturations are 82% on 40% oxygen. On examination, he has a mild polyphonic expiratory wheeze which is more pronounced on the right. On percussion of the chest, you detect hyper-resonance at the left apex. A chest X-Ray confirms a small left sided pneumothorax measuring 1.5 cm at the hilum. What would be the correct course of action?

	Discharge with follow up in 2-4 weeks
	Discharge without follow up
	Aspirate with cannula up to 2.5L and repeat X-Ray
	Insert Seldinger chest drain under radiological guidance
	Admit for 24 hours observation with conservative treatment

Dashboard

Overall score: 0%

1 -

Question 199 of 200

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<input type="checkbox"/>	Discharge with follow up in 2-4 weeks
<input type="checkbox"/>	Discharge without follow up
<input type="checkbox"/>	Aspirate with cannula up to 2.5L and repeat X-Ray
<input checked="" type="checkbox"/>	Insert Seldinger chest drain under radiological guidance
<input type="checkbox"/>	Admit for 24 hours observation with conservative treatment

Dashboard

Overall score: **0%**

1 -

Question 200 of 200

□ □

A 72-year-old man is admitted to hospital for an elective knee replacement. The surgery is completed successfully and induction, maintenance and emergence of anaesthesia proceeds without any problem. Several hours after the operation however, the patient's saturations start to drop, reaching a level of 91% when the patient is started on oxygen via face mask. He also starts coughing up small mucous plugs.

His background history includes mild COPD that is treated with tiotropium and hypertension which is treated with ramipril and amlodipine. There is no relevant family history and he has smoked 15 cigarettes a day for 30 years.

What is the most likely diagnosis?

	Basal atelectasis
	<i>Pneumococcus pneumoniae</i>
	<i>Streptococcus pneumoniae</i>
	Pulmonary embolism
	Pneumothorax

Dashboard

Overall score: 0%

1 -

Question 200 of 200



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	<i>Streptococcus pneumoniae</i>
	Pulmonary embolism
	Pneumothorax

Dashboard

Overall score: **0%**

1 -

Question 1 of 132

A 2-year-old girl develops a rash on her legs. The following day she is brought to the Emergency Department by which time the rash has spread to the rest of her body.



© Image used on license from DermNet NZ

What is the most likely diagnosis?

	Erythema multiforme
	Erythema chronica migrans
	Erythema nodosum
	Urticaria
	Dermatitis artefacta

Question 1 of 94

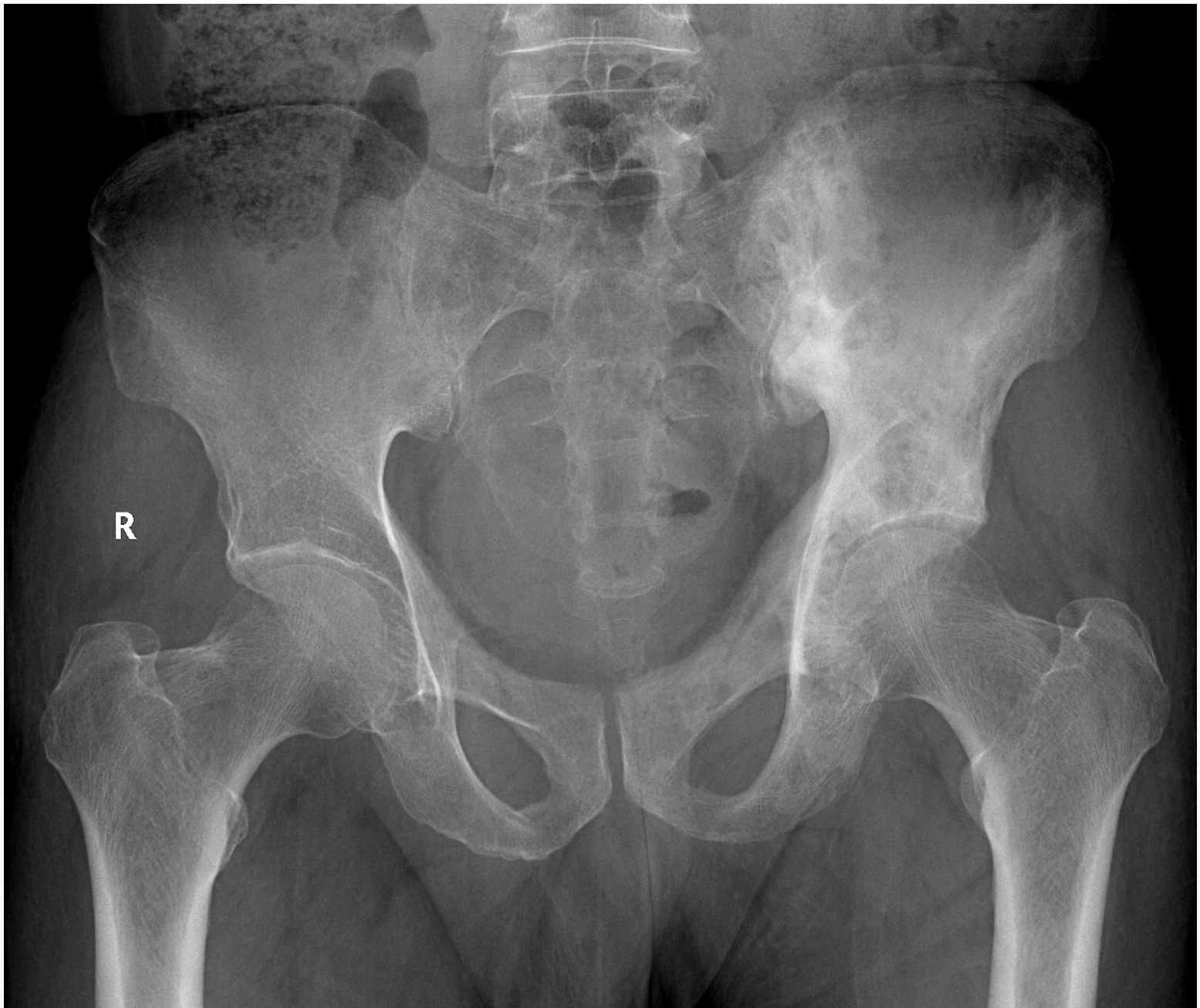
A 78-year-old man is investigated for headaches. A routine blood screen is normal other than an elevated ALP. A skull x-ray is ordered:



© Image used on license from Radiopaedia

What is the most likely diagnosis?

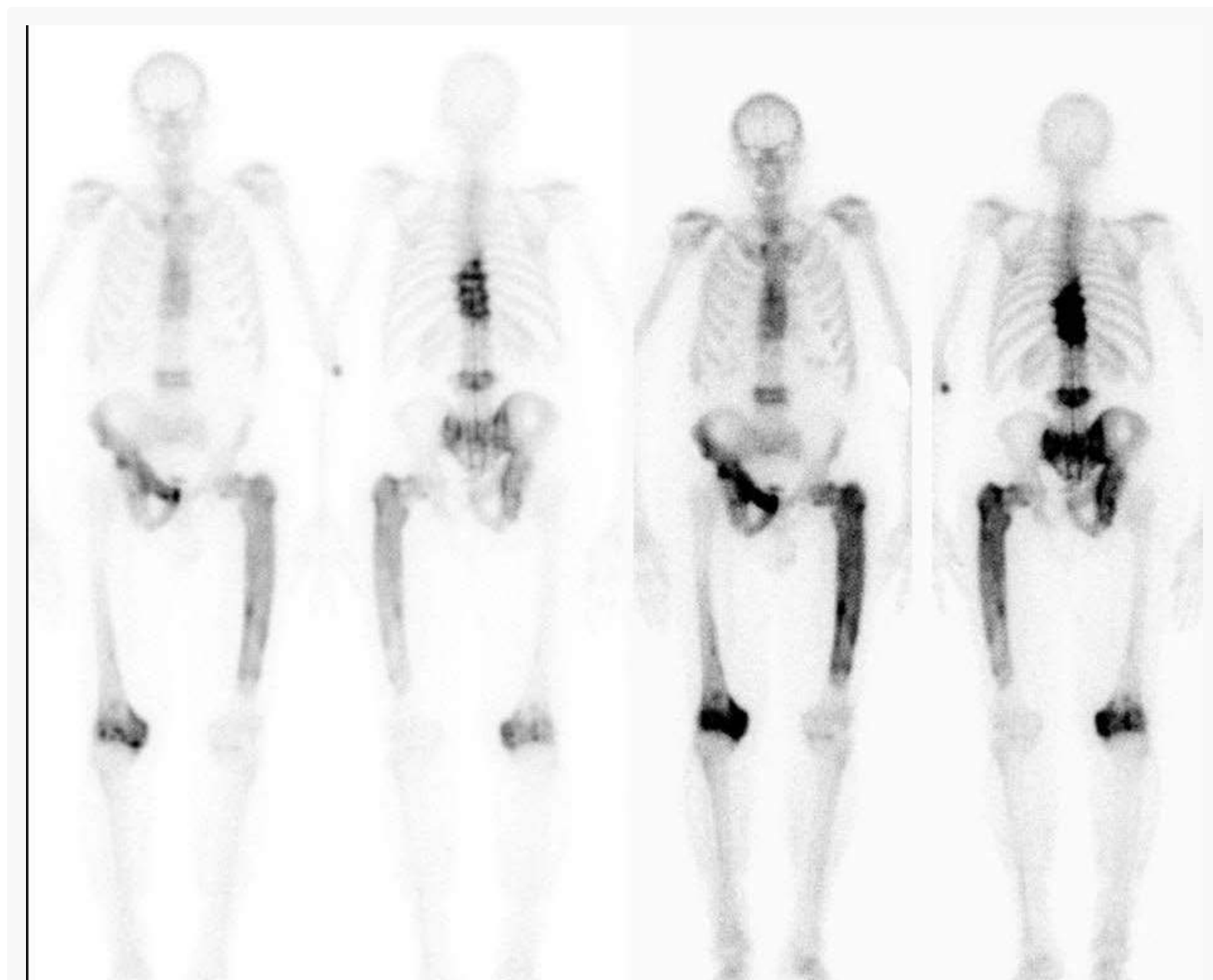
	Myeloma
	Cervical spondylosis
	Pituitary tumour
	Calcified temporal arteritis



Dashboard

Overall score: **0%**

1 -



□ Question 2 of 94

□ □

A 74-year-old woman complains of neck pain and stiffness. This has gradually developed over the past few years and is now at a point where she only has limited movement. A cervical spine film is requested:



© Image used on license from Radiopaedia



Based on the cervical spine film, what is the most likely diagnosis?

	Rheumatoid arthritis
	Osteoarthritis
	Ankylosing spondylitis
	Multiple myeloma
	Paget's disease

Dashboard

Overall score: 0%

1 -

Question 2 of 94



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© Image used on license from Radiopaedia



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Dashboard

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1 -

□ Question 2 of 94

□ □

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© Image used on license from Radiopaedia



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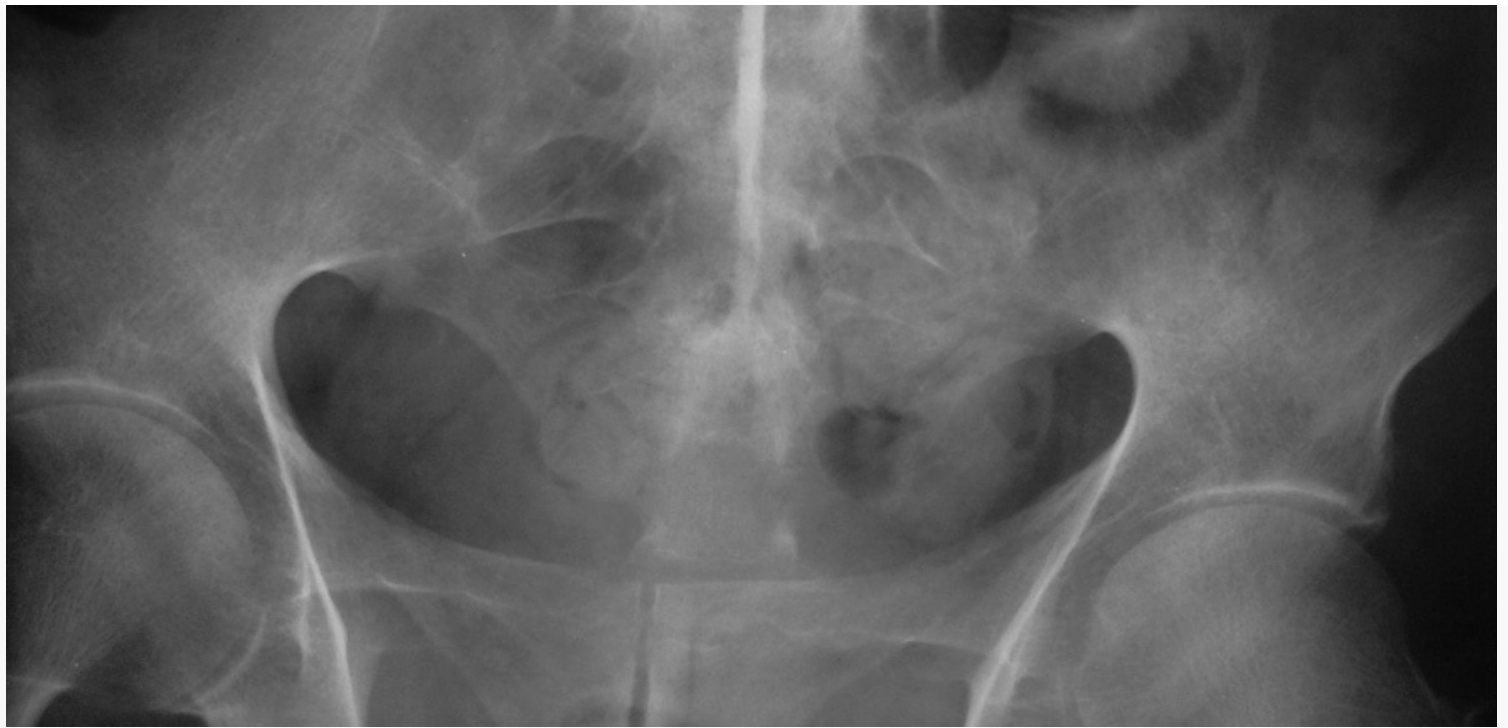
	Rheumatoid arthritis
	Osteoarthritis
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Dashboard

Overall score: **0%**

1 -





Question 2 of 94



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© Image used on license from Radiopaedia



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Dashboard

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□ Question 2 of 94

□ □

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	Multiple myeloma
	Paget's disease

Dashboard

Overall score: **0%**

1 -

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□ Question 2 of 94

□ □

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© Image used on license from Radiopaedia



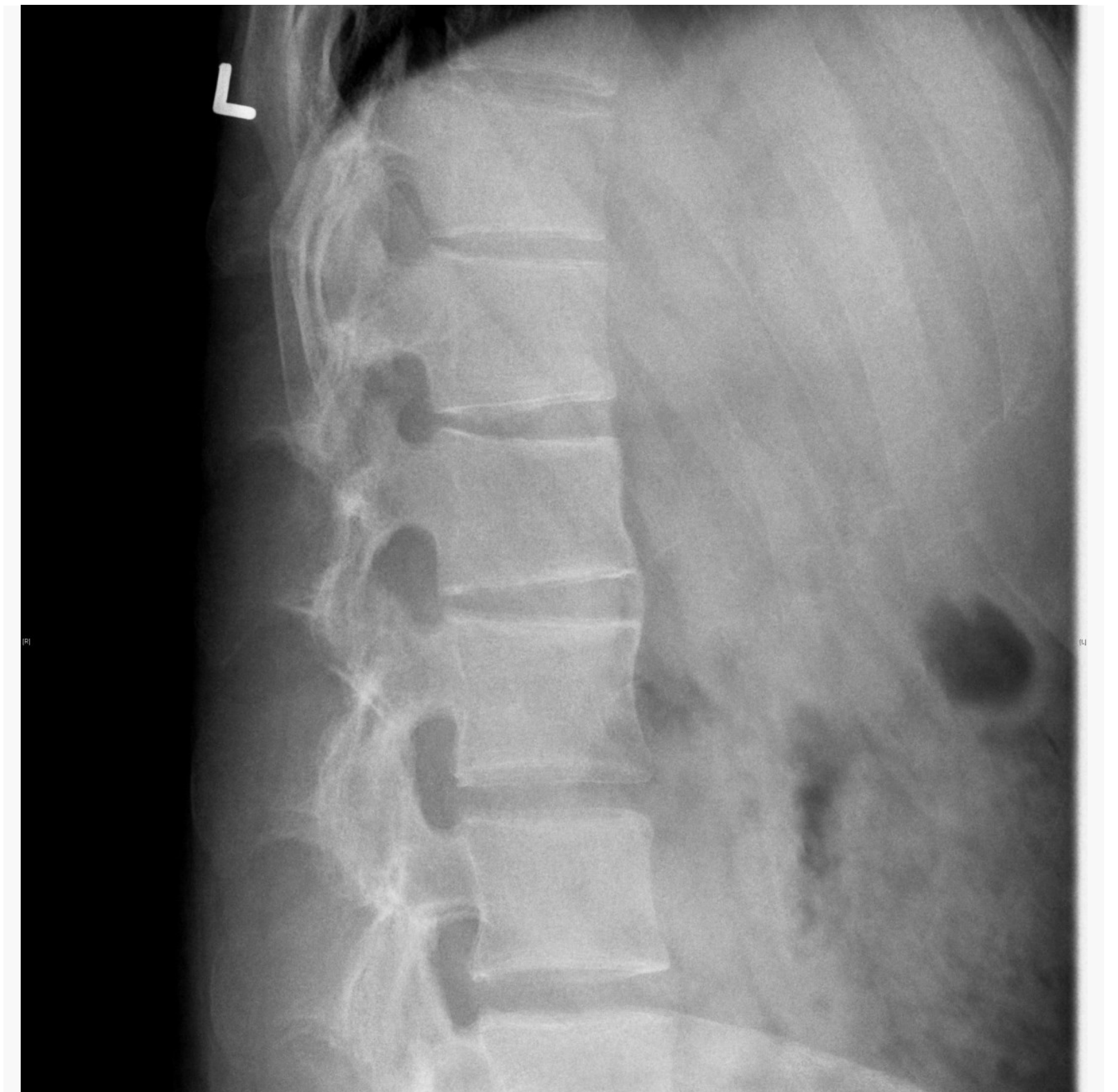
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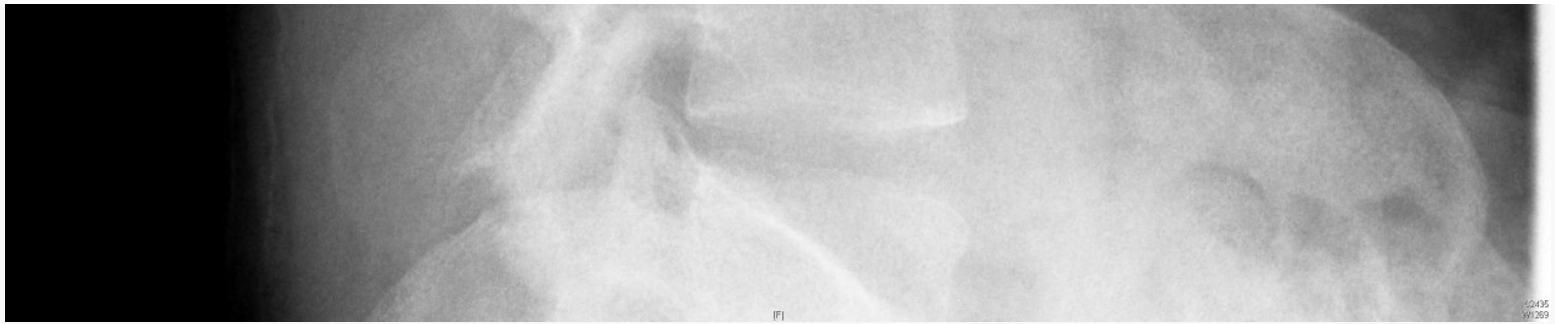
	Rheumatoid arthritis
	Osteoarthritis
	Ankylosing spondylitis
	Multiple myeloma
	Paget's disease

Dashboard

Overall score: **0%**

1 -





Question 3 of 94



A 51-year-old man presents to the emergency department with a 2-week history of lumbar back pain. He has a background of asthma, hypertension and benign prostatic hypertrophy (BPH). He has no history of trauma. Apart from a recent exacerbation of asthma, he is otherwise well.

On examination, you find a man of large body habitus. He is able to mobilise with some discomfort. He is afebrile, with a heart rate of 75 beats per minute and blood pressure 120/82mmHg. He has some spinal tenderness at L4, and discomfort on extension of the spine. On neurological examination he has no muscle wasting or fasciculations. He has full power in all limbs and normal tone. Reflexes are symmetrical and plantars downgoing. Sensation is intact and he has normal rectal tone, with no saddle anaesthesia.

Blood tests show:

Hb	14.1 g/dl
Platelets	245 * 10 ⁹ /l
WBC	8.0 * 10 ⁹ /l

Na ⁺	137 mmol/l
K ⁺	4.0 mmol/l
Urea	5.1 mmol/l
Creatinine	82 µmol/l

Bilirubin	14 µmol/l
ALP	42 u/l
ALT	17 u/l
CRP	3 mg/L
PSA	3.1ng/mL

What is the most likely diagnosis?

	Paget's disease
	Infective discitis
	Spinal metastases
	Vertebral compression fracture
	Lumbar radiculopathy

Dashboard

Overall score: 0%

1 -

□ Question 3 of 94



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What is the most likely diagnosis?

	Paget's disease
	Infective discitis
	Spinal metastases
	Vertebral compression fracture
	Lumbar radiculopathy

Dashboard

Overall score: 0%

1 -

Question 4 of 94

□ □

A 52-year-old female presents to rheumatology outpatient clinic with three months history of severe pain on her hands. She has no significant past medical history. On examination, there are swelling and erythema of the first, second and third metacarpophalangeal joints on both hands. She is diagnosed with rheumatoid arthritis.

CRP	34mg/L
-----	--------

What treatment should be started?

	Methotrexate
	Infliximab
	Methotrexate, prednisolone and sulfasalazine
	Sulfasalazine and prednisolone
	Azathioprine

Dashboard

Overall score: 0%

1 -

□ Question 4 of 94



A 52-year-old female presents to rheumatology outpatient clinic with three months history of severe pain on her hands. She has no significant past medical history. On examination, there are swelling and erythema of the first, second and third metacarpophalangeal joints on both hands. She is diagnosed with rheumatoid arthritis.

CRP	34mg/L
-----	--------

What treatment should be started?

	Methotrexate
	Infliximab
	Methotrexate, prednisolone and sulfasalazine
	Sulfasalazine and prednisolone
	Azathioprine

Dashboard

Overall score: 0%

1 -

□ Question 5 of 94



A 38-year-old Armenian visitor presents with 3 day history of pyrexia, shortness of breath, chest pain and abdominal pain, associated with temperature of 38.5 degrees. She has no other known past medical history and reports at least 2 other episodes of similar pain, both times spontaneously resolving without treatment or diagnosis. On examination, she has a pleural rub and a swollen, tender left 3rd metcarpal-phalangeal joint. Her mother has recently been admitted for similar symptoms last month. Her blood tests are as follow:

Hb	14.5 g/dl
Platelets	$560 \times 10^9/l$
WBC	$17.8 \times 10^9/l$

Na ⁺	143 mmol/l
K ⁺	4.6 mmol/l
Urea	5.2 mmol/l
Creatinine	78 μ mol/l
CRP	78 mg/l

A chest radiograph demonstrates mild bilateral pleural effusions with no significant focus of consolidation, her Mantoux test is negative. Urine dip is negative, urine MC+S grows no organisms, urinary porphobilinogen is negative. A rheumatology review was requested regarding the synovitis and colchicine prescribed. She responds well with resolution of all symptoms within 24 hours. An infectious diseases opinion and induced sputum is awaited. What is the most likely diagnosis?

	Tuberculosis
	Acute intermittent porphyria (AIP)
	Coxsackie B virus infection

	Familial mediterranean fever
	Systemic lupus erythematosus (SLE)

Dashboard

Overall score: **0%**

1 -

□ Question 5 of 94



A 38-year-old Armenian visitor presents with 3 day history of pyrexia, shortness of breath, chest pain and abdominal pain, associated with temperature of 38.5 degrees. She has no other known past medical history and reports at least 2 other episodes of similar pain, both times spontaneously resolving without treatment or diagnosis. On examination, she has a pleural rub and a swollen, tender left 3rd metcarpal-phalangeal joint. Her mother has recently been admitted for similar symptoms last month. Her blood tests are as follow:

Hb	14.5 g/dl
Platelets	$560 \times 10^9/l$
WBC	$17.8 \times 10^9/l$

Na ⁺	143 mmol/l
K ⁺	4.6 mmol/l
Urea	5.2 mmol/l
Creatinine	78 μ mol/l
CRP	78 mg/l

A chest radiograph demonstrates mild bilateral pleural effusions with no significant focus of consolidation, her Mantoux test is negative. Urine dip is negative, urine MC+S grows no organisms, urinary porphobilinogen is negative. A rheumatology review was requested regarding the synovitis and colchicine prescribed. She responds well with resolution of all symptoms within 24 hours. An infectious diseases opinion and induced sputum is awaited. What is the most likely diagnosis?

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	Coxsackie B virus infection

	Familial mediterranean fever
	Systemic lupus erythematosus (SLE)

Dashboard

Overall score: **0%**
1 -

Question 6 of 94

□ □

A 68 year old female diagnosed with rheumatoid arthritis four years ago presents gradually increasing tenderness in the small joints of both hands over the past 5 months. She continues to work as a legal secretary, involving significant amounts of time at a computer. She is currently on maximum doses of methotrexate and sulphasalazine on diagnosis and maintained on the same doses since. Her DAS score today is 5.8, it was 4.7 when you saw her in clinic last 1 month ago. What is the next management step?

	Continue methotrexate and sulphasalazine. Short-course oral prednisolone
	Stop current DMARDs. Start etanercept
	Stop current DMARDs. Start infliximab
	Admit for pulsed intravenous methylprednisolone
	Prescribe regular long-term celecoxib in addition to methotrexate and sulphasalazine

Dashboard

Overall score: 0%

1 -

Question 6 of 94

□ □

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	Stop current DMARDs. Start etanercept
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	Admit for pulsed intravenous methylprednisolone
	Prescribe regular long-term celecoxib in addition to methotrexate and sulphasalazine

Dashboard

Overall score: **0%**

1 -

□ Question 7 of 94



A 70-year-old man presents with a two-year history of stiffness and pain in his hands. The stiffness is worse in the mornings and tends to gradually ease after around an hour. On examination you note synovitis and swelling affecting the distal interphalangeal joints in both hands.

An x-ray is requested and shown below:



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What is the most likely diagnosis?

Osteoarthritis

	Myeloma
	Gout
	Rheumatoid arthritis
	Psoriatic arthritis

Dashboard

Overall score: **0%**

1 -

□ Question 7 of 94



A 70-year-old man presents with a two-year history of stiffness and pain in his hands. The stiffness is worse in the mornings and tends to gradually ease after around an hour. On examination you note synovitis and swelling affecting the distal interphalangeal joints in both hands.

An x-ray is requested and shown below:



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What is the most likely diagnosis?

Osteoarthritis

	Myeloma
	Gout
	Rheumatoid arthritis
	Psoriatic arthritis

Dashboard

Overall score: **0%**
1 -

□ Question 7 of 94

A 70-year-old man presents with a two-year history of morning stiffness in his hands and tends to gradually ease after around 30 minutes. He also reports pain at the distal interphalangeal joints in both hands.

An x-ray is requested and shown below:



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What is the most likely diagnosis?

Osteoarthritis

	Myeloma
	Gout
	Rheumatoid arthritis
	Psoriatic arthritis

Dashboard

Overall score: **0%**
1 -

□ Question 7 of 94

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An x-ray is requested and shown below:



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What is the most likely diagnosis?

Osteoarthritis

	Myeloma
	Gout
	Rheumatoid arthritis
	Psoriatic arthritis

Dashboard

Overall score: **0%**
1 -

□ Question 7 of 94

□ □

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An x-ray is requested and shown below:



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What is the most likely diagnosis?

Osteoarthritis

	Myeloma
	Gout
	Rheumatoid arthritis
	Psoriatic arthritis

Dashboard

Overall score: **0%**
1 -



□ Question 8 of 94

□ □

A 74-year-old female was admitted to the medical ward initially for the treatment of a CURB = 4 community-acquired pneumonia. She is now awaiting discharge but since her illness, she has not returned to her pre-morbid state. Her past medical history includes two previous myocardial infarctions, hypertension, type 2 diabetes mellitus, duodenal ulcer and obesity. In addition, the physiotherapists report significant right knee pain to be contributing to poor mobility. On questioning, the patient reports that the pain is chronic and has been progressively worsening for about 3 years.

Her GP had sent her for two X-rays previously that demonstrated cartilage loss and osteophyte formation, with a reduction in joint space. On examination, you note significant crepitus in the right knee, with reduced range of movements in flexion and extension. You also note bony outgrowths in the proximal interphalangeal joints of her second and third digits of her right hand. She had successfully lost 9kg in weight and had previously taken 1g paracetamol four times a day regularly but neither measure seemed to help her pain.

What is the most appropriate next step?

	Increase 500mg paracetamol as required
	Oral ibuprofen
	Topical diclofenac
	Oramorph as required
	Glucosamine

Dashboard

Overall score: 0%

1 -

□ Question 8 of 94

□ □

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	Topical diclofenac
	Oramorph as required
	Glucosamine

Dashboard

Overall score: 0%

1 -

Question 9 of 94

□ □

You see a new patient in dermatology outpatients clinic. A 65 year-old female has been referred by her GP with a new rash on her anterior shins. You review the past-medical history which includes a left sided Bell's palsy (poor resolution), a permanent pacemaker for complete heart block and a recent urinary tract infection treated with trimethoprim.

The GP letter describes a new anterior rash bilaterally on her shins that coincided with a viral illness for which the patient was symptomatic with arthralgia and myalgia. The GP letter describes the rash as large round dusky nodules. There is no rash on examination today in clinic.

What is the likely cause of the rash?

<input type="checkbox"/>	Trimethoprim
<input type="checkbox"/>	Sarcoidosis
<input type="checkbox"/>	Streptococcal infection
<input type="checkbox"/>	Mycoplasma pneumonia
<input type="checkbox"/>	Non-Hodgkin's lymphoma

Dashboard

Overall score: 0%

1 -

Question 9 of 94

□ □

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The GP letter describes a new anterior rash bilaterally on her shins that coincided with a viral illness for which the patient was symptomatic with arthralgia and myalgia. The GP letter describes the rash as large round dusky nodules. There is no rash on examination today in clinic.

What is the likely cause of the rash?

	Trimethoprim
	Sarcoidosis
	Streptococcal infection
	Mycoplasma pneumonia
	Non-Hodgkin's lymphoma

Dashboard

Overall score: **0%**

1 -

□ Question 10 of 94

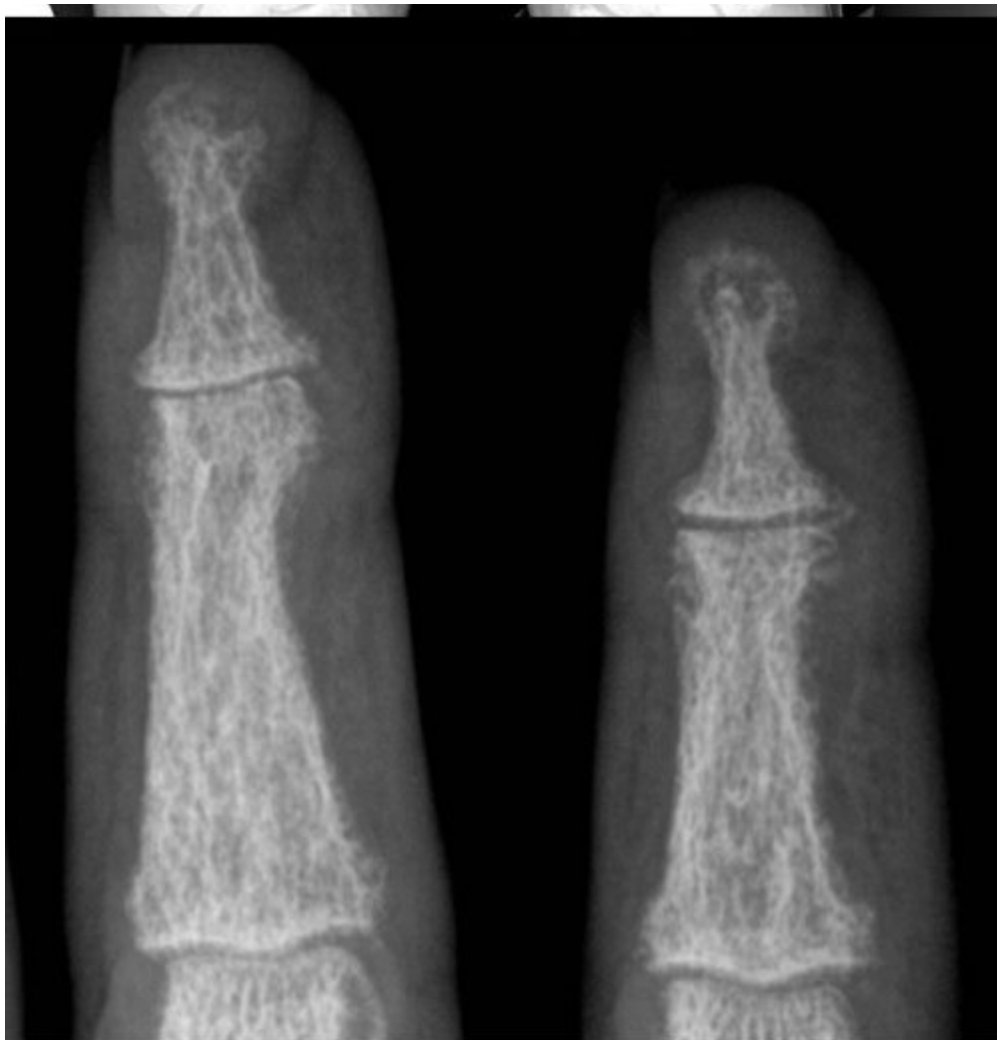


A 58-year-old woman of Indian ethnic origin presents with pain in her hands. These pains have been present for the past few months and are getting gradually worse. The hand pains are also associated with generalised aches which are worst around the shoulders, lower back and feet/ankles. On the review of systems she describes lethargy and polydipsia.

She has a past medical history of depression and hypertension which is well controlled with lisinopril.

A hand x-ray is requested:





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What is the most likely underlying diagnosis?

	Osteomalacia
	Tuberculosis
	Hyperparathyroidism
	Psoriatic arthritis
	Osteoarthritis

Dashboard

Overall score: 0%

1 -

□ Question 10 of 94

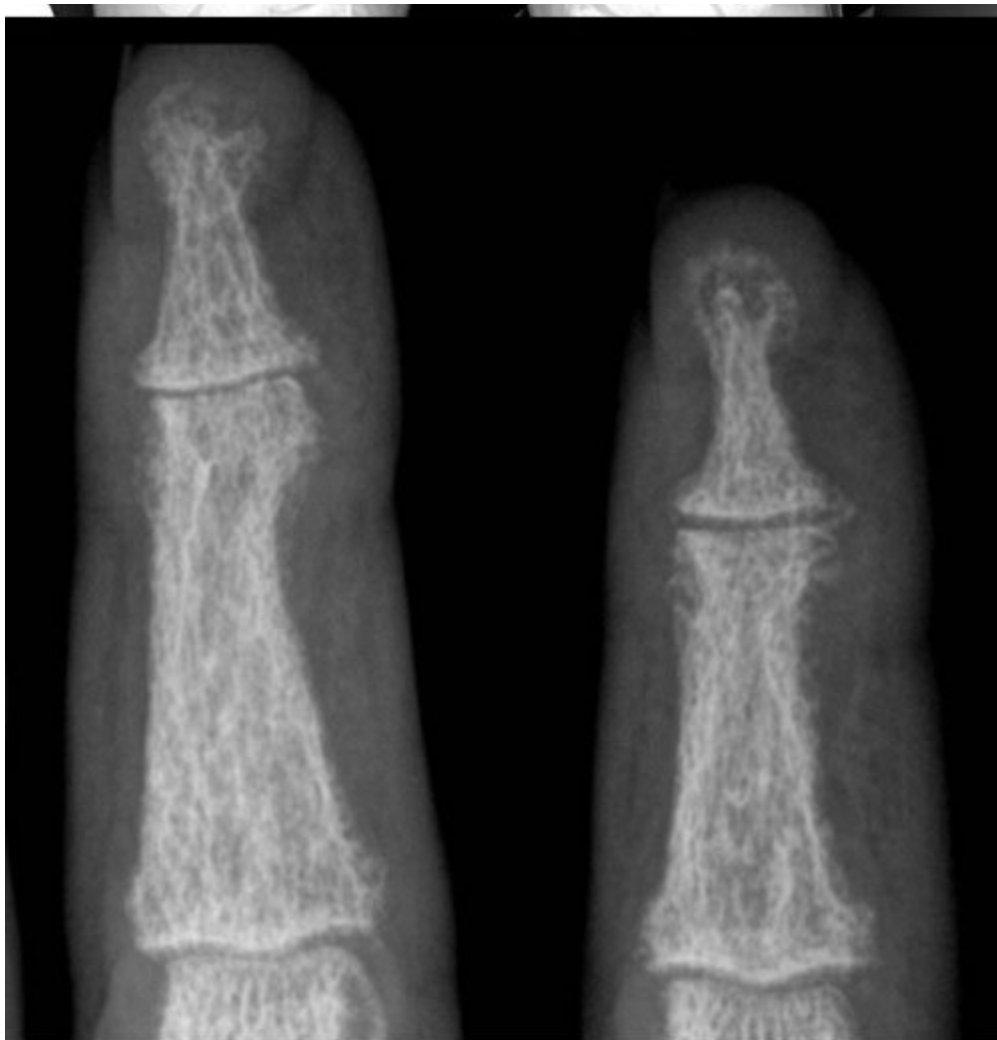


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She has a past medical history of depression and hypertension which is well controlled with lisinopril.

A hand x-ray is requested:





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What is the most likely underlying diagnosis?

	Osteomalacia
	Tuberculosis
	Hyperparathyroidism
	Psoriatic arthritis
	Osteoarthritis

Dashboard

Overall score: **0%**

1 -

□ Question 11 of 94



A 45 year old woman was referred to Rheumatology clinic after experiencing widespread aches and pains felt throughout her body. The pains were felt particularly in her arms and legs in addition to significant pain throughout the patients spinal column. The patient could not recall a precise onset of her symptoms but she felt they had been present for at least 12 months, possibly longer. In addition, the patient reported on-going feelings of tiredness and lethargy. Despite going to bed around 10 pm each evening, the patient reported waking in the morning still feeling exhausted. She denied any history of hot or tender joints, skin rashes, hair loss, swallowing difficulties or dry eyes. The patients appetite was described as normal for her with no significant change in weight.

There was no previous past medical history and the patient took no regular medications except for a non-prescription multi-vitamin. Family history was remarkable for hypothyroidism affecting her mother and elder sister. The patient worked as an accountant and lived with her two teenage children. She had separated from her ex-husband 18 months previously.

Examination did not demonstrate any evidence of active synovitis of the hands or feet with no other inflamed or deformed joints. Palpation of the muscles of the upper arms and legs as well as the paraspinal muscles was exquisitely tender. Neurological examination of the arms and legs was unremarkable. Cardiovascular and respiratory examination was unremarkable with no skin rashes.

During clinic interaction the patient appeared tired and stressed but had good rapport and maintained good eye contact. She denied any significant low mood but was anxious that her symptoms represented a serious underlying illness.

Investigations requested following clinic are listed below.

Haemoglobin	12.9 g / dL
White cell count	$7.2 \times 10^9/l$
Platelets	$332 \times 10^9/l$
Mean cell volume	87 fL
Sodium	140 mmol / L
Potassium	3.6 mmol / L
Urea	3.5 mmol / L

Creatinine	68 micromol / L
Erythrocyte sedimentation rate	11 mm / h
Rheumatoid factor	Negative
Anti-nuclear antigen	Weak positive
B12	324 pmol / L (reference 74-516)
Folate	30 nmol / L (reference 7-36)
Serum immunoglobulin	Normal electrophoresis strip
Thyroid stimulating hormone	0.9 microU / mL (reference 0.4-5.0)

X-rays of hands: some minor degenerative change in right index proximal interphalangeal joint but otherwise unremarkable with no bony erosion or deformity

What is the cause for the patients pain?

<input type="checkbox"/>	Fibromyalgia
<input type="checkbox"/>	Systemic lupus erythematosus
<input type="checkbox"/>	Chronic regional pain syndrome
<input type="checkbox"/>	Generalised anxiety disorder
<input type="checkbox"/>	Depression

Dashboard

Overall score: **0%**

1 -

□ Question 11 of 94



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What is the cause for the patients pain?

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	Systemic lupus erythematosus
	Chronic regional pain syndrome
	Generalised anxiety disorder
	Depression

Dashboard
Overall score: 0% 1 -

□ Question 12 of 94



An 82-year-old gentleman was referred to the outpatients rheumatology clinic by his GP. He presented to his GP six weeks ago complaining of significant shoulder girdle stiffness. He felt weak and lethargic and complained of malaise. He also complained of pain and stiffness in both wrists, but especially his right wrist. The stiffness was worst in the morning, lasting an hour before easing off with activity. A trial of ibuprofen 400mg TDS alleviated his symptoms partially. On systems review, he denied any further symptoms, including the absence of weight loss, respiratory and urinary symptoms. He denied losing weight. He had previously been well, with a past medical history comprising of osteoarthritis of his knee joints, asthma and hypertension. He had never smoked and consumed eight units of alcohol per week.

Examination revealed an elderly gentleman who was systemically well. His temperature was 37.4°C, heart rate 74 bpm, and blood pressure 138/78 mmHg. Examination of his musculoskeletal system revealed the presence of right wrist tenderness and slight swelling, as well as restricted active movements of his shoulders. Examination of his cardiovascular, respiratory, gastrointestinal and neurological systems was unremarkable.

Initial investigations by his GP revealed the following results:

ESR	55 mm/hr
CRP	58 mg/l
CPK	188 u/l (reference range 17-148)
PSA	2.6 ng/ml

Serum electrophoresis	normal clonal pattern
Rheumatoid factor	pending
Anti-CCP	pending
Full antibody screen	pending

Chest x-ray: normal heart and lung fields

Urine Bence Jones protein: negative

From the information so far, what is the most likely diagnosis?

	Paraneoplastic syndrome
	Late onset rheumatoid arthritis (RA)
	Polymyalgia rheumatica (PMR)
	Polymyositis
	Giant cell arteritis

Dashboard

Overall score: 0%

1 -

□ Question 12 of 94



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Dashboard

Overall score: 0%

1 -

□ Question 13 of 94



A 60 year old woman attended her General Practitioner and reported a three month history of bilateral shoulder muscle and bilateral hip girdle aches and pain. She also experienced stiffness affecting these areas that lasted for up to two hours each morning. These symptoms were limiting her day to day activities and were unresponsive to simple analgesics.

The patient denied symptoms of headache, visual disturbance or jaw claudication. Intermittent episodes of dry mouth and dry eyes had been present for several years. There was no history of unexplained skin rashes. Past medical history included coeliac disease diagnosed twenty years previously that was well controlled on a gluten-free diet. The patient was a non-smoker and drank alcohol only occasionally.

Examination revealed mild muscular tenderness across the shoulder and hip girdles although with no other inflamed or tender joints. Cardiovascular and respiratory examination was unremarkable.

Blood tests requested by her GP demonstrated an elevated ESR of 65. A diagnosis of PMR was made and a course of 20 mg prednisolone daily prescribed. However 6 weeks later the patients symptoms had not significantly improved and she was referred to rheumatology clinic. Repeat blood tests and other investigations are listed below.

Haemoglobin	110 g / dL
White cell count	$8.9 \times 10^9/\text{L}$
Neutrophils	$7.8 \times 10^9/\text{L}$
Platelets	$456 \times 10^9/\text{L}$
Urea	6.2 mmol / L
Creatinine	87 micromol / L
Sodium	138 mmol / L
Potassium	4.1 mmol / L
Ferritin	180 ng / mL
Erythrocyte sedimentation rate	75 mm / h

Rheumatoid factor	Negative
Connective tissue ANA	Negative
Anti-CCP antibodies	58 EU (reference < 20)
Creatinine kinase	89 U / L (reference 5-130)

X-ray hands: minor degenerative change in multiple inter-phalangeal joints of both hands; no evidence of erosive arthropathy

What is correct diagnosis?

<input type="checkbox"/>	Polymyalgia rheumatica
<input type="checkbox"/>	Rheumatoid arthritis
<input type="checkbox"/>	Polymyositis
<input type="checkbox"/>	Sjorgren's syndrome
<input type="checkbox"/>	Systemic lupus erythematosus

Dashboard

Overall score: **0%**

1 -

□ Question 13 of 94



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<input type="checkbox"/>	Polymyositis
<input type="checkbox"/>	Sjorgren's syndrome
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Dashboard

Overall score: **0%**

1 -

□ Question 14 of 94



A 71-year-old man with a history of chronic obstructive pulmonary disease (COPD) is investigated for back pain. Over the past 10 years he has had numerous admissions for infective exacerbations of COPD and currently uses long-term oxygen therapy. The pain came on suddenly whilst he was at his local supermarket.

A MRI scan is requested:





What is the most likely underlying cause of the back pain?

	Osteomyelitis
	Multiple myeloma
	Pott's disease
	Metastatic lung cancer
	Osteoporosis

Dashboard

Overall score: **0%**

1 -

□ Question 14 of 94



A 71-year-old man with a history of chronic obstructive pulmonary disease (COPD) is investigated for back pain. Over the past 10 years he has had numerous admissions for infective exacerbations of COPD and currently uses long-term oxygen therapy. The pain came on suddenly whilst he was at his local supermarket.

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Dashboard

Overall score: **0%**

1 -

□ Question 14 of 94

□ □

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	Osteomyelitis
	Multiple myeloma
	Pott's disease
	Metastatic lung cancer
	Osteoporosis

Dashboard

Overall score: **0%**

1 -



□ Question 15 of 94



A 62-year-old lady is seen in the rheumatology clinic. She was diagnosed with rheumatoid arthritis 16 years ago. Her symptoms were relatively well controlled with a combination of methotrexate 20mg once per week, folic acid 5mg once per week and azathioprine 100mg once per day until the last few months when she complained of increasing joint pain with stiffness. Since then her methotrexate dose was gradually titrated to the current dose of 25mg per week. She reported that her joints were less painful and stiff in the morning. Unfortunately, she was also complained of increasing tiredness with an increasing quantity of respiratory tract infections, requiring antibiotics twice in the last six months. She also noted that she bruised more easily of late.

Examination revealed a slender 62-year-old systemically well lady. She was haemodynamically normal and afebrile. Cardiovascular and respiratory examinations were unremarkable, and abdominal examination revealed a mass arising from the left upper quadrant. Clinical examination of her joints revealed no evidence of synovitis or swelling.

Routine blood investigations prior to attending clinic were as follows:

Hb	115 g/l
MCV	84 fl
Platelets	$82 \times 10^9/l$
WBC	$3.5 \times 10^9/l$
Neutrophils	$1.6 \times 10^9/l$
Lymphocytes	$1.0 \times 10^9/l$
Eosinophils	$0.9 \times 10^9/l$

Na ⁺	141 mmol/l
K ⁺	3.9 mmol/l
Urea	7.0 mmol/l
Creatinine	81 μ mol/l

Bilirubin	12 µmol/l
ALP	99 u/l
ALT	13 u/l
Albumin	39 g/l

What is the single most likely cause of the clinical and haematological abnormalities?

	Myelodysplastic syndrome
	Chronic lymphocytic leukaemia
	Marrow aplasia secondary to drug therapy
	Felty's syndrome
	Myelodysplasia

Dashboard

Overall score: **0%**

1 -

□ Question 15 of 94



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Bilirubin	12 µmol/l
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ALT	13 u/l
Albumin	39 g/l

What is the single most likely cause of the clinical and haematological abnormalities?

	Myelodysplastic syndrome
	Chronic lymphocytic leukaemia
	Marrow aplasia secondary to drug therapy
	Felty's syndrome
	Myelodysplasia

Dashboard

Overall score: **0%**

1 -

□ Question 16 of 94



A 47-year-old lady presented with a three-week history of pain in her fingers. She had noticed her hands were getting extremely cold when she went outside and turned a 'funny colour'. When she came back inside her hands were very painful as they began to warm up. She had managed in the past by wearing gloves outside but now had ulcers on her fingertips which she had never experienced before. She also complained of epigastric pain and had longstanding shortness of breath.

Her past medical history included pulmonary fibrosis and hypertension. Her medications included propranolol, amlodipine, simvastatin and omeprazole.

On examination the skin over her hands was dry and shiny and there was severe digital ulceration on three fingertips of the left hand. There was no exudate or erythema. The fingertips were dusky in colour and extremely tender. The skin over the upper arms and chest appeared normal. On auscultation of the lungs there were fine bibasal inspiratory crepitations which did not alter in character upon coughing. Heart sounds were normal with no added murmurs. There was a left ventricular heave

Which of the following is the most appropriate management plan for this lady?

	Start flucloxacillin and stop all anti-hypertensive medications
	Educate this lady about the use of gloves and hand-warmers and increase her amlodipine dose
	Stop amlodipine and refer for an urgent dermatology assessment
	Stop propranolol and admit for an iloprost infusion
	Start high dose oral prednisolone

[Dashboard](#)

Overall score: 0%

□ Question 16 of 94



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	Start high dose oral prednisolone

Dashboard

Overall score: **0%**

Question 17 of 94



A 53 year old has just been diagnosed with rheumatoid arthritis whilst having a severe flare. She is started on methotrexate 15mg once weekly, folic acid 5mg once weekly, hydroxychloroquine 200mg BD, naproxen 250mg TDS and prednisolone 15mg OD. She returns one month later complaining of mouth ulcers, what should be done?

Hb	142 g/l
Platelets	225 * 10 ⁹ /l
WBC	6 * 10 ⁹ /l
Na ⁺	136 mmol/l
K ⁺	4.2 mmol/l
Urea	4 mmol/l
Creatinine	95 µmol/l
Bilirubin	6 µmol/l
ALP	105 u/l
ALT	92 u/l

	Admit for IV methylprednisolone
	Stop methotrexate, hydroxychloroquine and naproxen
	Increase folic acid to two days a week
	Stop hydroxychloroquine and discuss with rheumatology
	Stop methotrexate and discuss with rheumatology

Overall score: **0%**

1 -

Question 17 of 94



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Na ⁺	136 mmol/l
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Urea	4 mmol/l
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Bilirubin	6 µmol/l
ALP	105 u/l
ALT	92 u/l

	Admit for IV methylprednisolone
	Stop methotrexate, hydroxychloroquine and naproxen
	Increase folic acid to two days a week
	Stop hydroxychloroquine and discuss with rheumatology
	Stop methotrexate and discuss with rheumatology

Dashboard

Overall score: **0%**

1 -

Question 18 of 94

□ □

A 24 year old who is known to have psoriasis presents with arthralgia. She has noticed that her knuckles have become swollen and her psoriasis has got much worse over the last four months. On examination, she has severe plaque psoriasis on her extensors and scalp leading to alopecia. Her metacarpophalangeal joints are clearly swollen and tender. She is currently on naproxen 500mg BD, paracetamol 1g TDS, topical steroids and calcipotriol. What medication would you add?

	Leflunomide
	Sulfasalazine
	Hydroxychloroquine
	Methotrexate
	Infliximab

Dashboard

Overall score: 0%

1 -

Question 18 of 94

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Dashboard

Overall score: **0%**

1 -

Question 18 of 94

A 24 year old who is known to have psoriasis presents with swollen fingers and her psoriasis has got much worse over the last 6 months. She has psoriasis on her extensors and scalp leading to alopecia. She is currently on naproxen 500mg BD, paracetamol 1g 4 times daily. What drug would you add?



<input type="radio"/>	Leflunomide
<input type="radio"/>	Sulfasalazine
<input type="radio"/>	Hydroxychloroquine
<input checked="" type="radio"/>	Methotrexate
<input type="radio"/>	Infliximab

Dashboard

Overall score: **0%**

1 -

Question 18 of 94

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<input type="radio"/>	Leflunomide
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<input type="radio"/>	Hydroxychloroquine
<input checked="" type="radio"/>	Methotrexate
<input type="radio"/>	Infliximab



Dashboard

Overall score: **0%**

1 -

□ Question 18 of 94

□ □

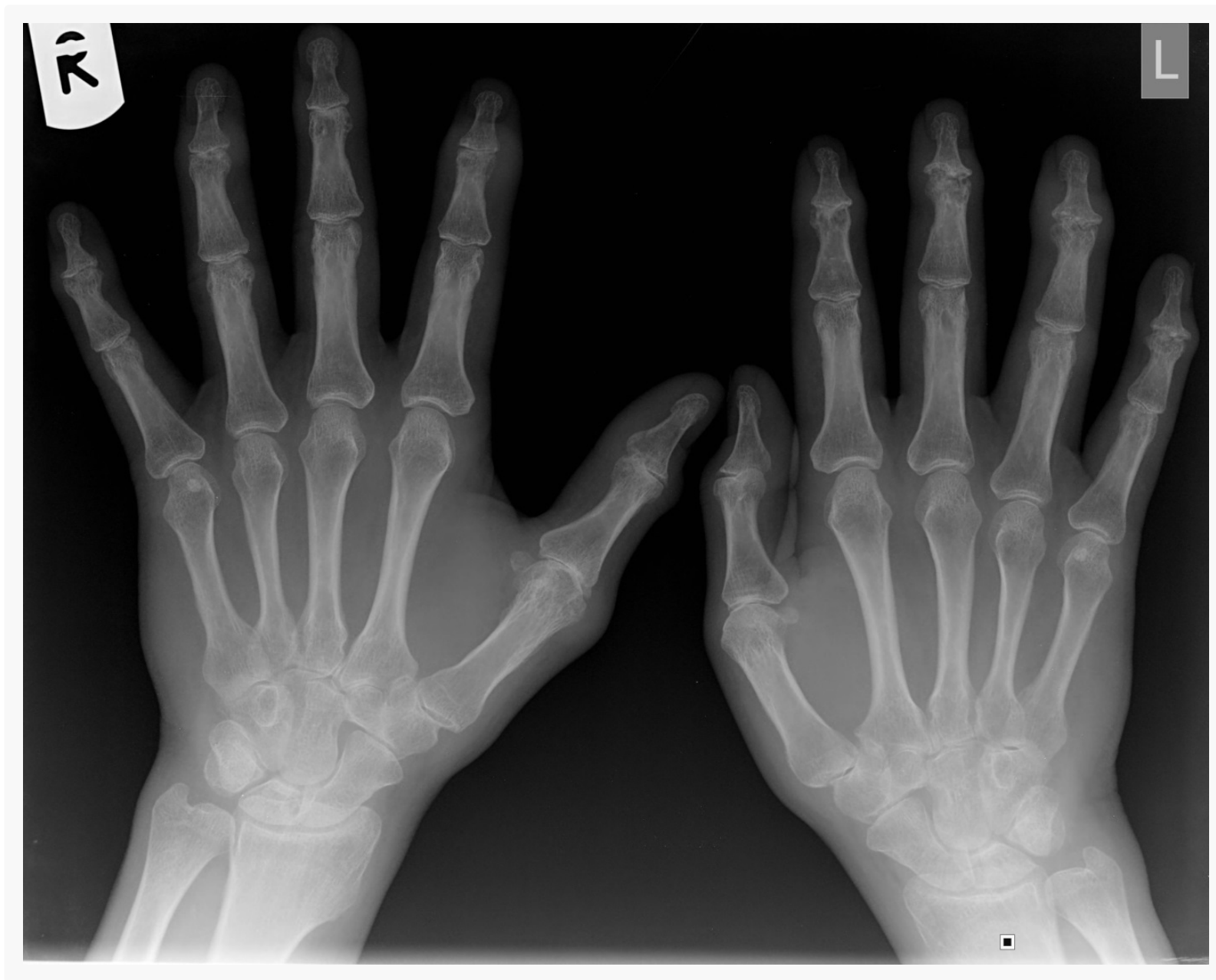
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	Leflunomide
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Dashboard

Overall score: 0%

1 -



□ Question 19 of 94



A 78-year-old man has a cervical spine film after falling down the stairs at his house. He has no history of musculoskeletal problems, including no neck or arm pain.

The cervical spine film is shown below:



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What does the cervical spine film show?

	Diffuse idiopathic skeletal hyperostosis
	Multiple myeloma
	Cervical rib
	Spondylosis of the cervical spine
	Ankylosing spondylitis

Dashboard

Overall score: **0%**

1 -

□ Question 19 of 94

□ □

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1 -

□ Question 19 of 94

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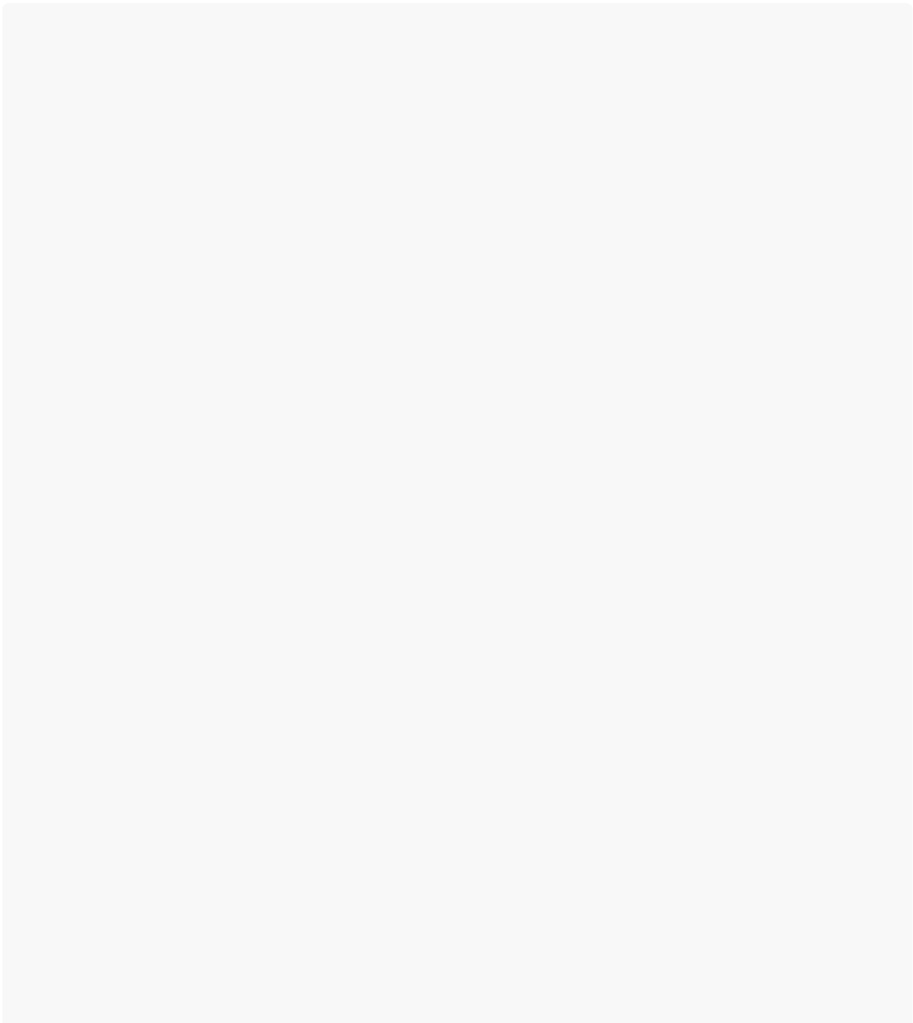
	Diffuse idiopathic skeletal hyperostosis
	Multiple myeloma

	Cervical rib
	Spondylosis of the cervical spine
	Ankylosing spondylitis

Dashboard

Overall score: 0%

1 -





□ Question 20 of 94

□ □

A 63-year-old female presents to gastroenterology outpatient clinic with a four-week history of gastric reflux, which has not improved despite being prescribed both ranitidine and omeprazole by her GP. She is awaiting an urgent OGD to investigate symptoms further. She reports having lost 7kg in weight over the past 6 months and is also distressed by appearances of white hard lumps appearing on her fingertips. On examination, you note cool peripheries and dry mucous membranes, left thumb calcinosis surrounded by shiny skin up to her wrist joint and wrinkling of skin around her mouth. Her blood tests as follows demonstrate she is positive for anticentromere antibodies. What is the most likely diagnosis?

	Diffuse cutaneous systemic sclerosis
	Systemic sclerosis sine scleroderma
	Zollinger-Ellison syndrome
	Limited cutaneous systemic sclerosis
	Raynaud's syndrome

Dashboard

Overall score: 0%

1 -

□ Question 20 of 94

□ □

A 63-year-old female presents to gastroenterology outpatient clinic with a four-week history of gastric reflux, which has not improved despite being prescribed both ranitidine and omeprazole by her GP. She is awaiting an urgent OGD to investigate symptoms further. She reports having lost 7kg in weight over the past 6 months and is also distressed by appearances of white hard lumps appearing on her fingertips. On examination, you note cool peripheries and dry mucous membranes, left thumb calcinosis surrounded by shiny skin up to her wrist joint and wrinkling of skin around her mouth. Her blood tests are as follows demonstrate she is positive for anticentromere antibodies. What is the most likely diagnosis?

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	Systemic sclerosis sine scleroderma
	Zollinger-Ellison syndrome
	Limited cutaneous systemic sclerosis
	Raynaud's syndrome

Dashboard

Overall score: **0%****1** -

Question 20 of 94

A 63-year-old female presents to gastroenterology (not improved despite being prescribed both ranitidine and omeprazole) to investigate symptoms further. She reports having lost weight and has appearances of white hard lumps appearing on her mucous membranes, left thumb calcinosis surrounding mouth. Her blood tests are as follows demonstrate a diagnosis?



<input type="radio"/>	Diffuse cutaneous systemic sclerosis
<input type="radio"/>	Systemic sclerosis sine scleroderma
<input type="radio"/>	Zollinger-Ellison syndrome
<input checked="" type="radio"/>	Limited cutaneous systemic sclerosis
<input type="radio"/>	Raynaud's syndrome

Dashboard

Overall score: **0%**

1 -

Question 20 of 94

A 63-year-old female presents to gastroenterology with reflux symptoms that have not improved despite being prescribed both ranitidine and omeprazole. You decide to investigate symptoms further. She reports having lost weight and the appearances of white hard lumps appearing on her fingers and around her mouth. Her mucous membranes, left thumb calcinosis surrounding the thumb nail. Her blood tests are as follows demonstrate the most likely diagnosis?



<input type="radio"/>	Diffuse cutaneous systemic sclerosis
<input type="radio"/>	Systemic sclerosis sine scleroderma
<input type="radio"/>	Zollinger-Ellison syndrome
<input checked="" type="radio"/>	Limited cutaneous systemic sclerosis
<input type="radio"/>	Raynaud's syndrome

Dashboard

Overall score: **0%**

1 -

Question 20 of 94

A 63-year-old female presents to gastroenterology with reflux symptoms that have not improved despite being prescribed both ranitidine and omeprazole. She is investigated further. She reports having long-standing appearances of white hard lumps appearing on her fingers and around her mouth. Her blood tests are as follows demonstrate the most likely diagnosis?

<input type="radio"/>	Diffuse cutaneous systemic sclerosis
<input type="radio"/>	Systemic sclerosis sine scleroderma
<input type="radio"/>	Zollinger-Ellison syndrome
<input checked="" type="radio"/>	Limited cutaneous systemic sclerosis
<input type="radio"/>	Raynaud's syndrome



Dashboard

Overall score: **0%**

1 -

□ Question 21 of 94



A 39-year-old lady presented to the emergency department acutely unwell with fever, weight loss and malaise. She had been finding it increasingly difficult to mobilise in recent weeks due to weakness in her right ankle. She had diarrhoea and was passing loose brown stool up to five times a day. She had a previous medical history of asthma and sinusitis. Her medications included a salbutamol inhaler, salmeterol inhaler, montelukast and intermittent courses of prednisolone and antibiotics as required.

On examination, she appeared unwell, had petechial purpura in the nail beds of her fingers and on her feet, expiratory wheeze on auscultation of her chest, a soft abdomen with no palpable masses and weakness of dorsiflexion of her right ankle. Her temperature was 37.4 degrees Celsius, her pulse was 115 beats per minute and regular, her blood pressure was 140/95 mmHg, her respiratory rate was 24 breaths per minute and her oxygen saturations were 94% on room air.

Investigations:

Urine dip: blood++, protein+

Haemoglobin	95 g/L
White cell count	$23.6 \times 10^9 /L$
Platelet Count	$181 \times 10^9 /L$
Neutrophils	$12.3 \times 10^9 /L$
Eosinophils	$9.6 \times 10^9 /L$
Basophils	$0.2 \times 10^9 /L$
Lymphocytes	$1 \times 10^9 /L$
Monocytes	$0.5 \times 10^9 /L$
Erythrocyte sedimentation rate	65mm/hr
INR	0.9

Serum sodium	138mmol/L
--------------	-----------

Serum potassium	4.6mmol/L
Serum urea	15.4mmol/L
Serum creatinine	220micromol/L

Antinuclear antibody	negative
C-terminus antineutrophil cytoplasmic antibodies	negative
Myeloperoxidase anti-neutrophil cytoplasmic antibodies	positive

What is the most likely diagnosis?

<input type="radio"/>	Infective endocarditis
<input type="radio"/>	Wegener's granulomatosis
<input type="radio"/>	E.Coli gastroenteritis
<input type="radio"/>	Churg-Strauss syndrome
<input type="radio"/>	Crohn's disease

Dashboard

Overall score: **0%**

1 -

□ Question 21 of 94



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Antinuclear antibody	negative
C-terminus antineutrophil cytoplasmic antibodies	negative
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What is the most likely diagnosis?

	Infective endocarditis
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Dashboard

Overall score: **0%**

1 -

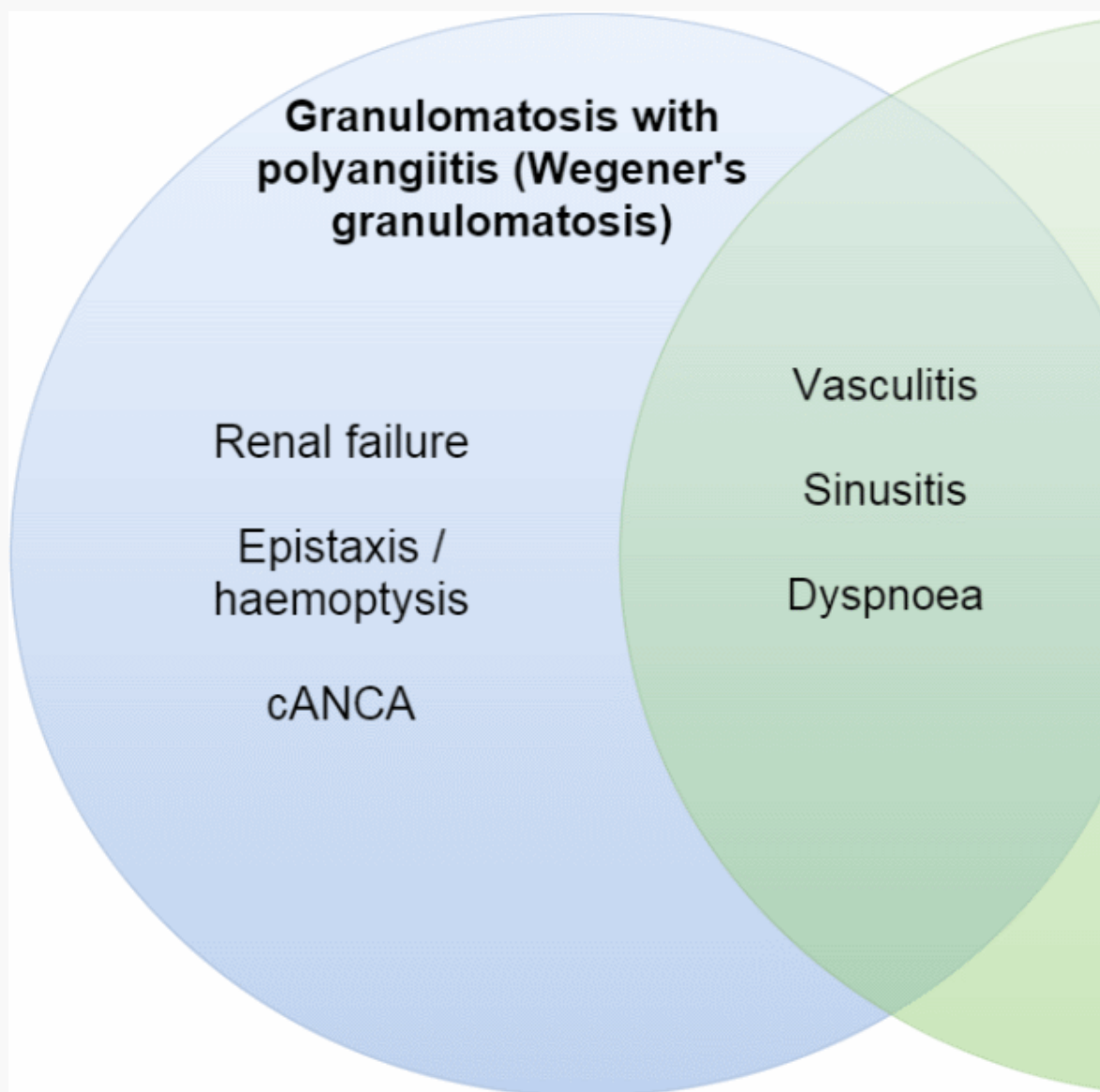
Question 21 of 94

A 39-year-old lady presented with a 2-week history of increasing cough and was passing loose brown stools. Her medications included a statin and antibiotics as required.

On examination, she appeared well. There was no wheeze on auscultation of her lungs. Her temperature was 38.5°C, her blood pressure was 140/95 mmHg, her respiratory rate was 20/min.

Investigations:

Urine dip: blood++, protein+



Haemoglobin	
White cell count	23.6 x10 ⁹ /L
Platelet Count	181x10 ⁹ /L
Neutrophils	12.3 x10 ⁹ /L
Eosinophils	9.6 x10 ⁹ /L
Basophils	0.2 x10 ⁹ /L
Lymphocytes	1 x10 ⁹ /L
Monocytes	0.5 x10 ⁹ /L
Erythrocyte sedimentation rate	65mm/hr
INR	0.9

Serum sodium	138mmol/L
--------------	-----------

Serum potassium	4.6mmol/L
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Antinuclear antibody	negative
C-terminus antineutrophil cytoplasmic antibodies	negative
Myeloperoxidase anti-neutrophil cytoplasmic antibodies	positive

What is the most likely diagnosis?

	Infective endocarditis
	Wegener's granulomatosis
	E.Coli gastroenteritis
	Churg-Strauss syndrome
	Crohn's disease

Dashboard
Overall score: 0% 1 -

□ Question 22 of 94



A 41-year-old man presents with lower back pain. The pain has been getting gradually worse over the past nine months and is located in the lower lumbar spine. Other than a slightly pigmented sclera no other abnormalities are found on examination. A number of x-rays are obtained:



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What is the most likely diagnosis?

<input type="checkbox"/>	Fabry's disease
<input type="checkbox"/>	Alkaptonuria
<input type="checkbox"/>	Homocystinuria
<input type="checkbox"/>	Osteopetrosis

Dashboard

Overall score: **0%**

1 -

□ Question 22 of 94



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Dashboard

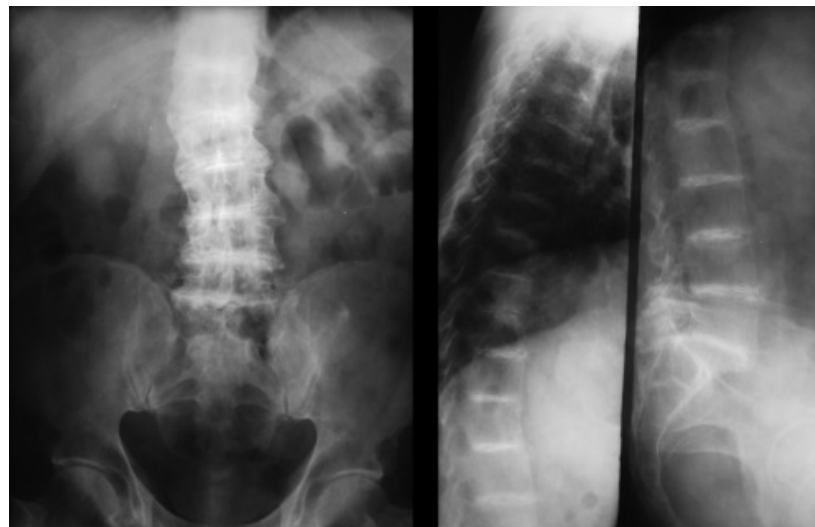
Overall score: **0%**

1 -

□ Question 22 of 94

□ □

A 41-year-old man presents with lower back pain. The pain has been getting gradually worse over the past nine months and is located in the lower lumbar spine. Other than a slightly pigmented sclera no other abnormalities are found on examination. A number of x-rays are obtained:



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What is the most likely diagnosis?

	Fabry's disease
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	Homocystinuria
	Osteopetrosis

Dashboard

Overall score: **0%**

1 -

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[Back to top](#)



Question 23 of 94

□ □

A 41-year-old woman presents with tightening of fingers, mild difficulty swallowing, and mild shortness of breath on exertion. She takes pantoprazole for reflux. On examination there is tightening of skin in her fingers, however the rest of the skin is normal. Her joints are not inflamed. The rest of her examination was normal (including chest examination). Her chest X-ray is also normal. There is mild decrease in DLCO on lung function tests. Which of the following antibodies are indicative of the underlying diagnosis?

	Anti-Scl-70 antibody
	Anti-dsDNA antibody
	Rh factor antibody
	Anti-centromere antibody
	Anti-Jo-1 antibody

Dashboard

Overall score: 0%

1 -

□ Question 23 of 94

□ □

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Dashboard

Overall score: **0%****1** -

Question 23 of 94

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Dashboard

Overall score: **0%**

1 -

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Dashboard

Overall score: **0%**

1 -

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Dashboard

Overall score: **0%**

1 -

□ Question 24 of 94

□ □

A 40-year-old man is investigated for back. For the past few months he has been troubled with pain in his lower back which is typically worse in the morning and better by the end of the day. There is some radiation of pain to the right buttock but no leg pains. An x-ray of his lumbar spine is shown below



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What is the most likely cause of his back pain?

	Lumbar disc prolapse at multiple levels
	Osteopetrosis
	Calcification of the vertebral artery
	Spinal stenosis
	Ankylosing spondylitis

Dashboard

Overall score: 0%

1 -

□ Question 24 of 94

□ □

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1 -

□ Question 24 of 94

□ □

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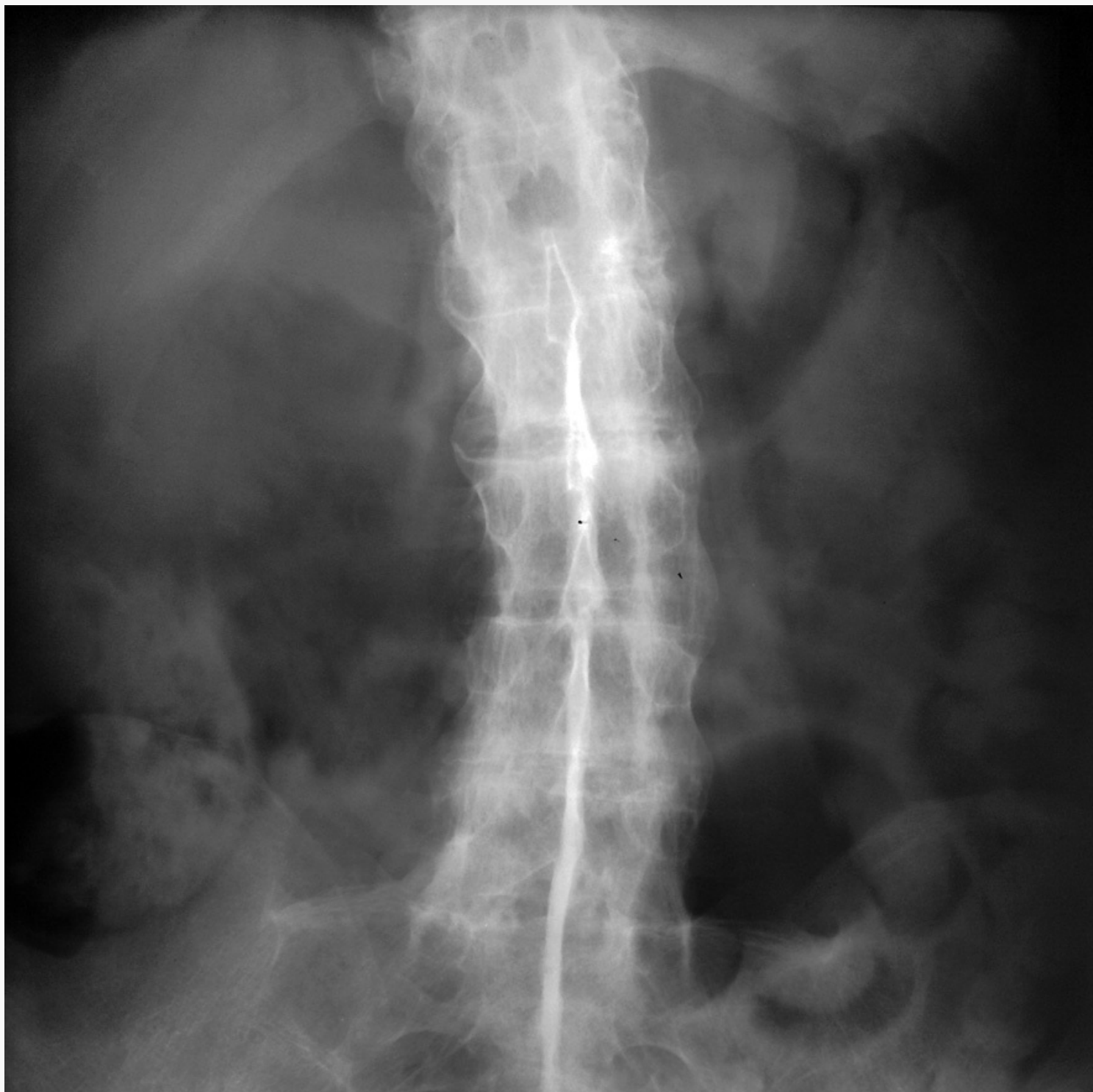
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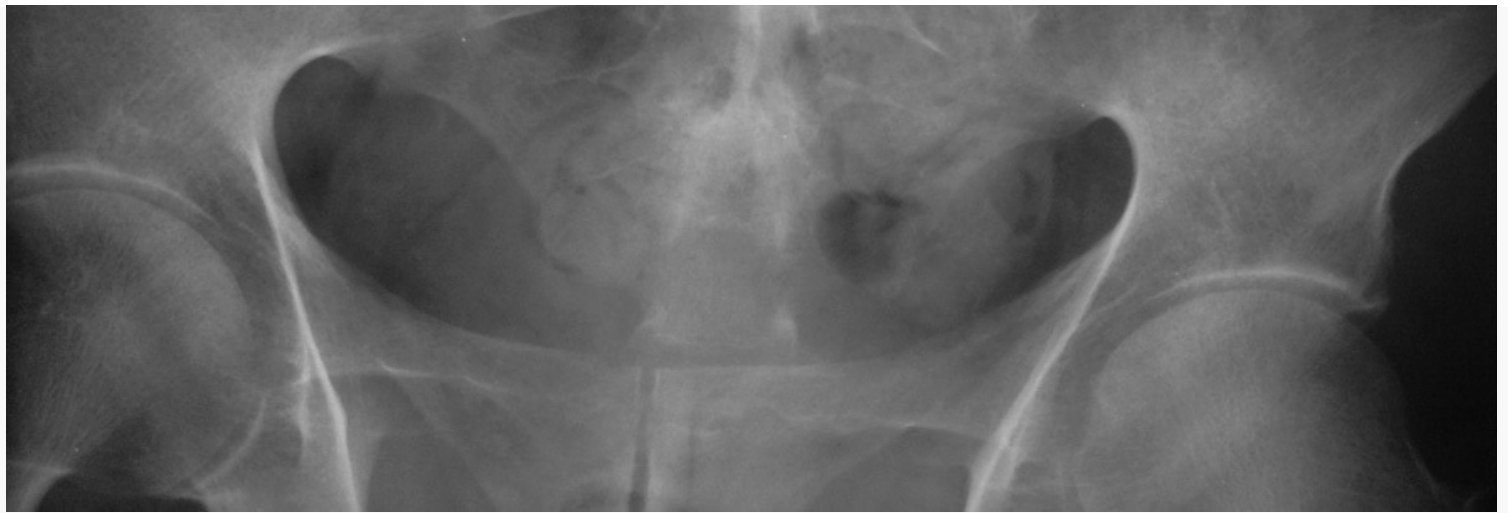
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	Calcification of the vertebral artery
	Spinal stenosis
	Ankylosing spondylitis

Dashboard

Overall score: **0%**

1 -

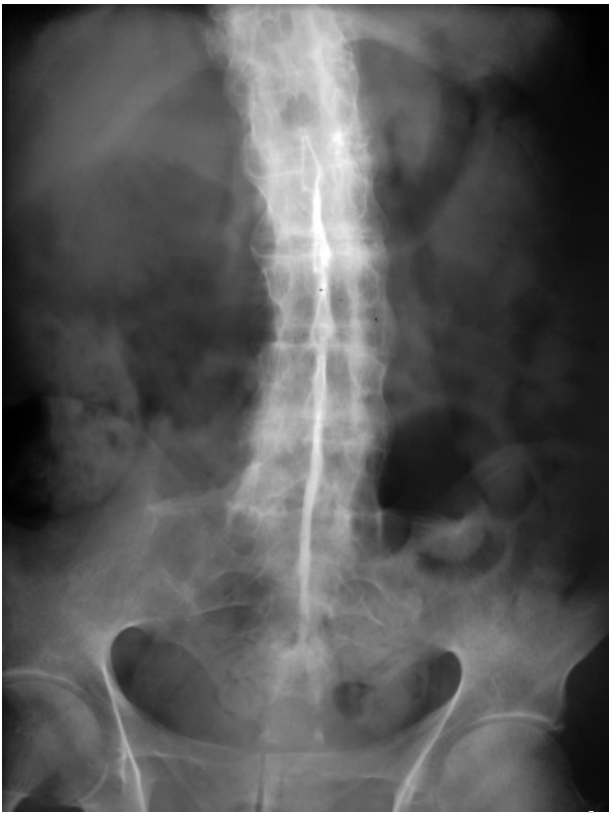




Question 24 of 94



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Overall score: **0%**

1 -



□ Question 24 of 94

□ □

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	Ankylosing spondylitis

Dashboard

Overall score: **0%**

1 -

Sr 4
Am 1

[H]

Study Date: 06/03/09
Study Time: 15:22:33
MRH

[M]

[T]

L

[F]

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□ Question 24 of 94

□ □

A 40-year-old man is investigated for back. For the past few months he has been troubled with pain in his lower back which is typically worse in the morning and better by the end of the day. There is some radiation of pain to the right buttock but no leg pains. An x-ray of his lumbar spine is shown below



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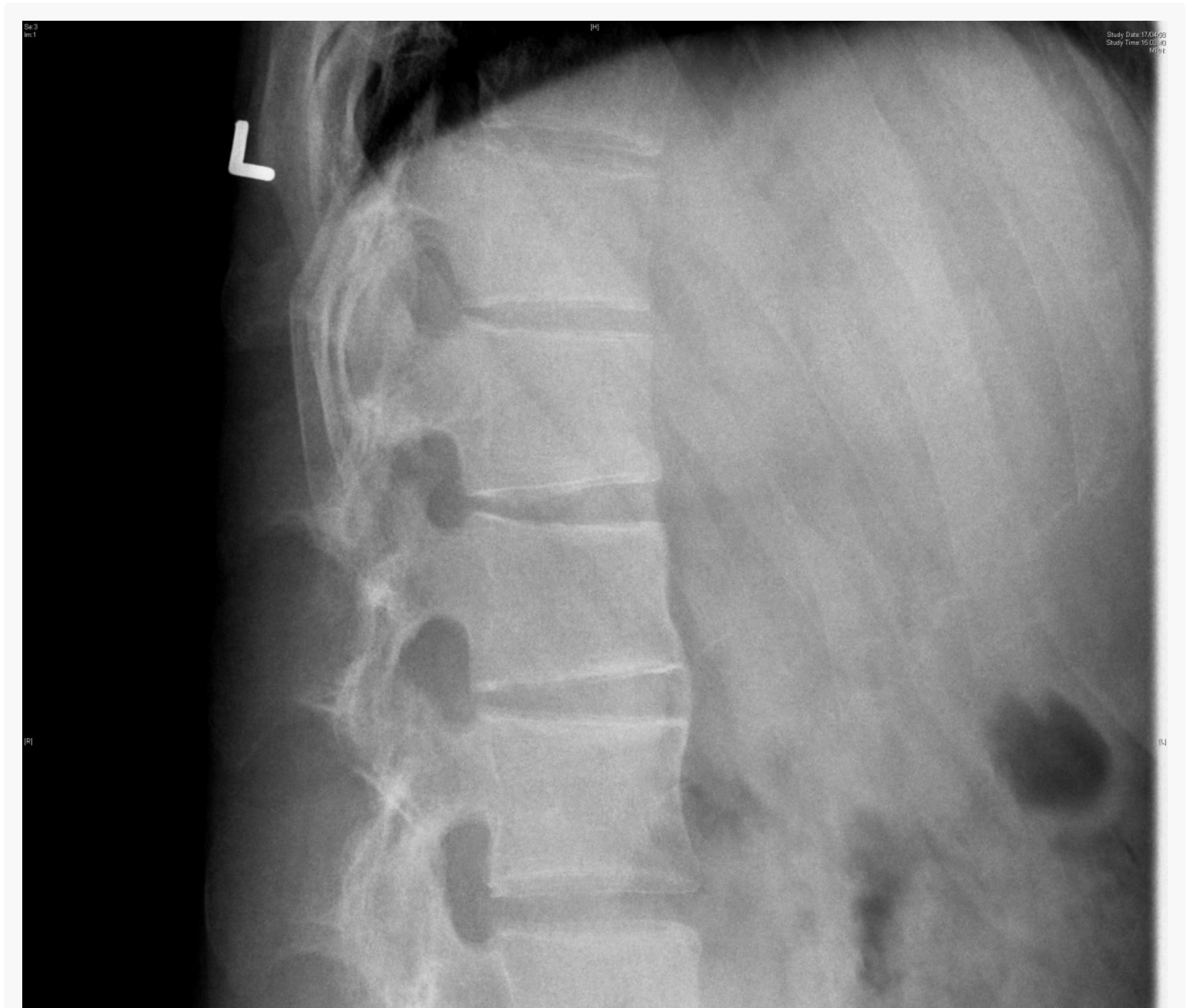
What is the most likely cause of his back pain?

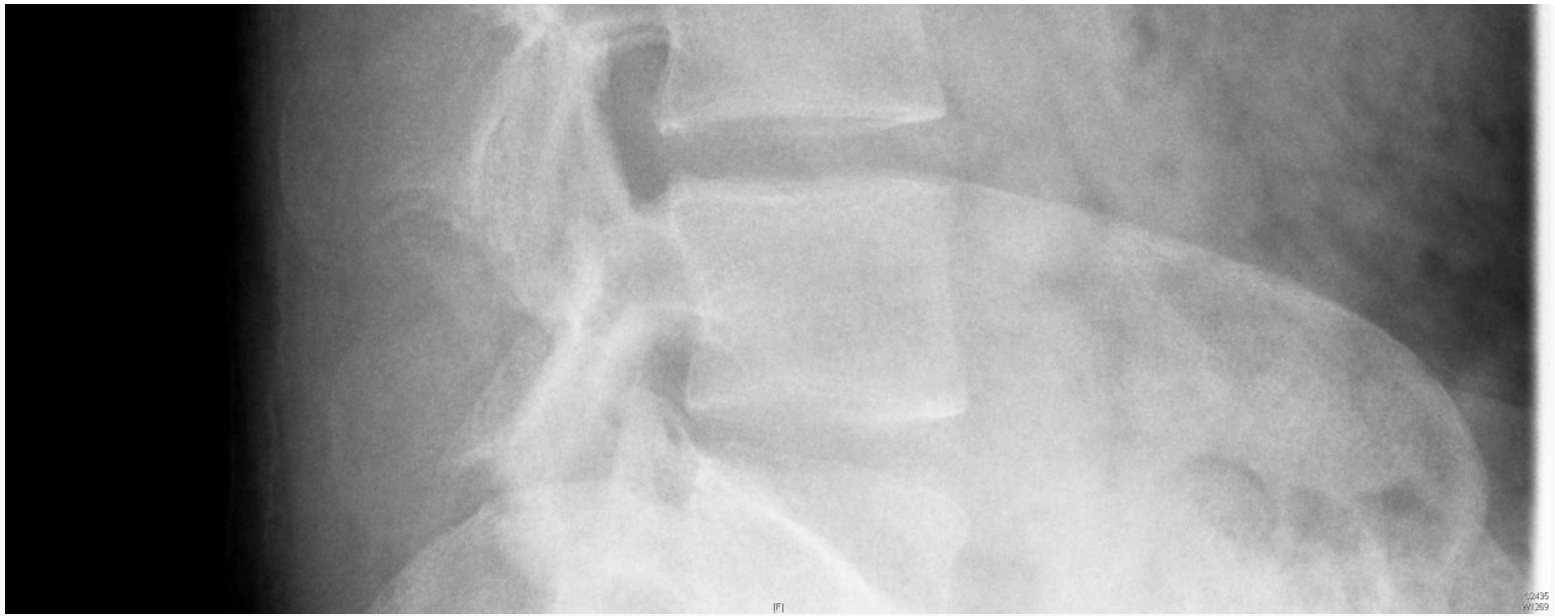
	Lumbar disc prolapse at multiple levels
	Osteopetrosis
	Calcification of the vertebral artery
	Spinal stenosis
	Ankylosing spondylitis

Dashboard

Overall score: **0%**

1 -





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Question 25 of 94

□ □

A 50 year old patient comes in with a six month history of polyarthralgia in her hands. Blood tests show she is rheumatoid factor positive, anti-CCP antibody positive and anti nuclear antibody positive with a high titre. An ultrasound scan confirms active synovitis in the metacarpophalangeal joints of her hands bilaterally. What drug regime would you start this lady on?

	Methotrexate and prednisolone
	Methotrexate and hydroxychloroquine
	Sulfasalazine and hydroxychloroquine
	Sulfasalazine, hydroxychloroquine and prednisolone
	Methotrexate, hydroxychloroquine and prednisolone

Dashboard

Overall score: 0%

1 -

Question 25 of 94

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	Sulfasalazine and hydroxychloroquine
	Sulfasalazine, hydroxychloroquine and prednisolone
	Methotrexate, hydroxychloroquine and prednisolone

Dashboard

Overall score: **0%**

1 -

Question 26 of 94

□ □

Please look at the hands of this 50-year-old lady. She complains of tight, stiff fingers that turn white in the cold.



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What is the most likely diagnosis?

	Osteoarthritis
	Rheumatoid arthritis
	Systemic lupus erythematosus
	Cryoglobulinaemia
	Limited cutaneous systemic sclerosis

Dashboard

Overall score: **0%**

1 -

Question 26 of 94

□ □

Please look at the hands of this 50-year-old lady. She complains of tight, stiff fingers that turn white in the cold.



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Dashboard

Overall score: **0%**

1 -

□ Question 26 of 94

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© Image used on license from DermNet NZ



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Dashboard

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1 -

Question 26 of 94

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© Image used on license from DermNet NZ

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Dashboard

Overall score: **0%**

1 -

Question 26 of 94

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© Image used on license from DermNet NZ

What is the most likely diagnosis?

	Osteoarthritis
	Rheumatoid arthritis
	Systemic lupus erythematosus
	Cryoglobulinaemia
	Limited cutaneous systemic sclerosis

Dashboard

Overall score: **0%**

1 -

□ Question 27 of 94



A 60-year-old man is referred to the rheumatology clinic with progressive pains in his hands. His past medical history includes hypertension for which he takes ramipril and indapamide. The referral letter includes the following bloods taken during a recent flare:

CRP	54 mg/l
Rheumatoid factor	negative
Adj calcium	2.51 mmol/l

An x-ray is taken:



What is the most likely diagnosis?

	Metastatic prostate cancer
	Rheumatoid arthritis
	Osteoarthritis
	Gout
	Primary hyperparathyroidism

Dashboard

Overall score: **0%**

1 -

□ Question 27 of 94



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Dashboard

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1 -

□ Question 27 of 94

□ □

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	Osteoarthritis
	Gout
	Primary hyperparathyroidism

Dashboard

Overall score: **0%**
1 -



□ Question 27 of 94

□ □

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	Rheumatoid arthritis
	Osteoarthritis
	Gout
	Primary hyperparathyroidism

Dashboard

Overall score: **0%**
1 -



Question 28 of 94

□ □

A 56-year-old man presents with buttock pain. This has been present for many years but has recently become worse. The pain is usually worse in the early part of the day and often eases by the late afternoon. An x-ray is requested:



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What is the most likely underlying diagnosis?

	Ankylosing spondylitis
	Alkaptonuria
	Multiple myeloma
	Peripheral arterial disease
	Bilateral hip osteoarthritis

Dashboard

Overall score: **0%**

1 -

Question 28 of 94

□ □

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1 -

□ Question 28 of 94

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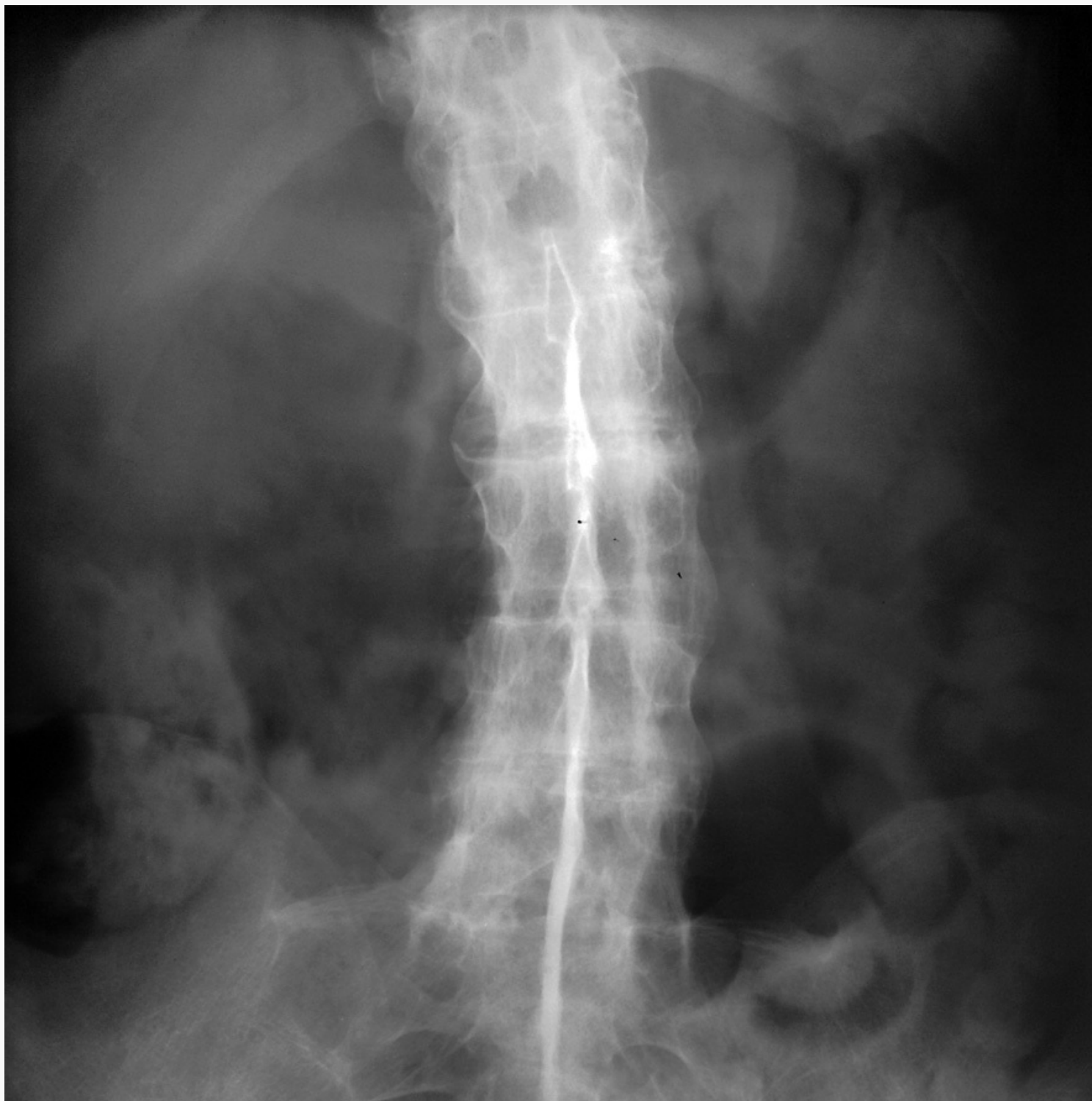
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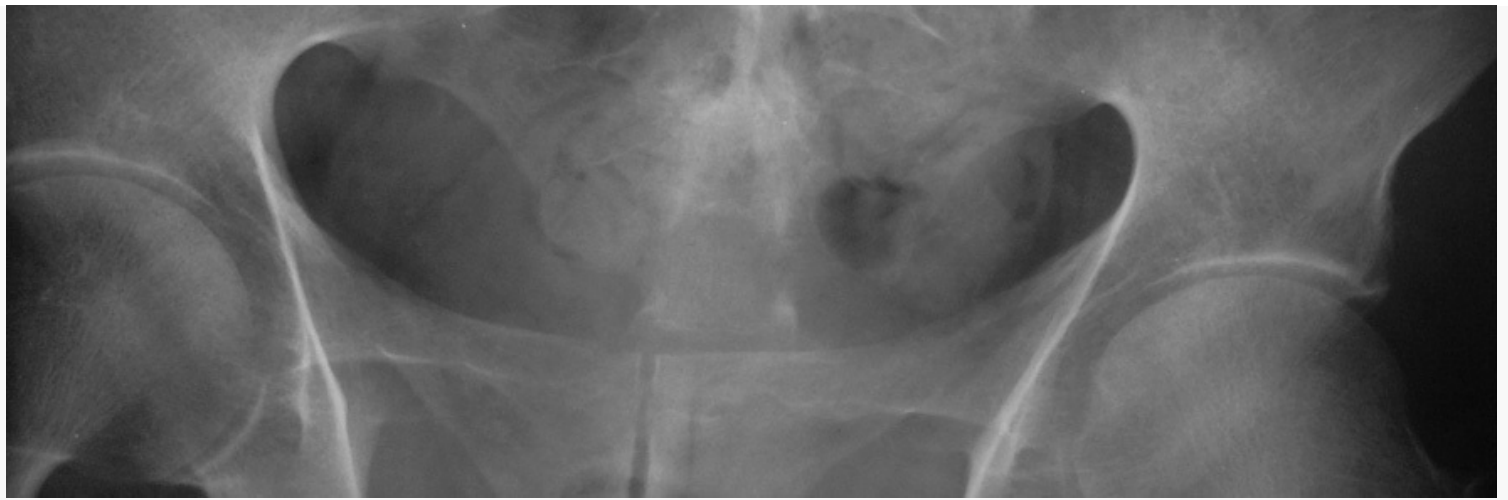
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Dashboard

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1 -





Question 28 of 94



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1 -



Question 28 of 94

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Dashboard

Overall score: **0%**

1 -

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Study Time: 15:22:33
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□ Question 28 of 94

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Dashboard

Overall score: **0%**

1 -

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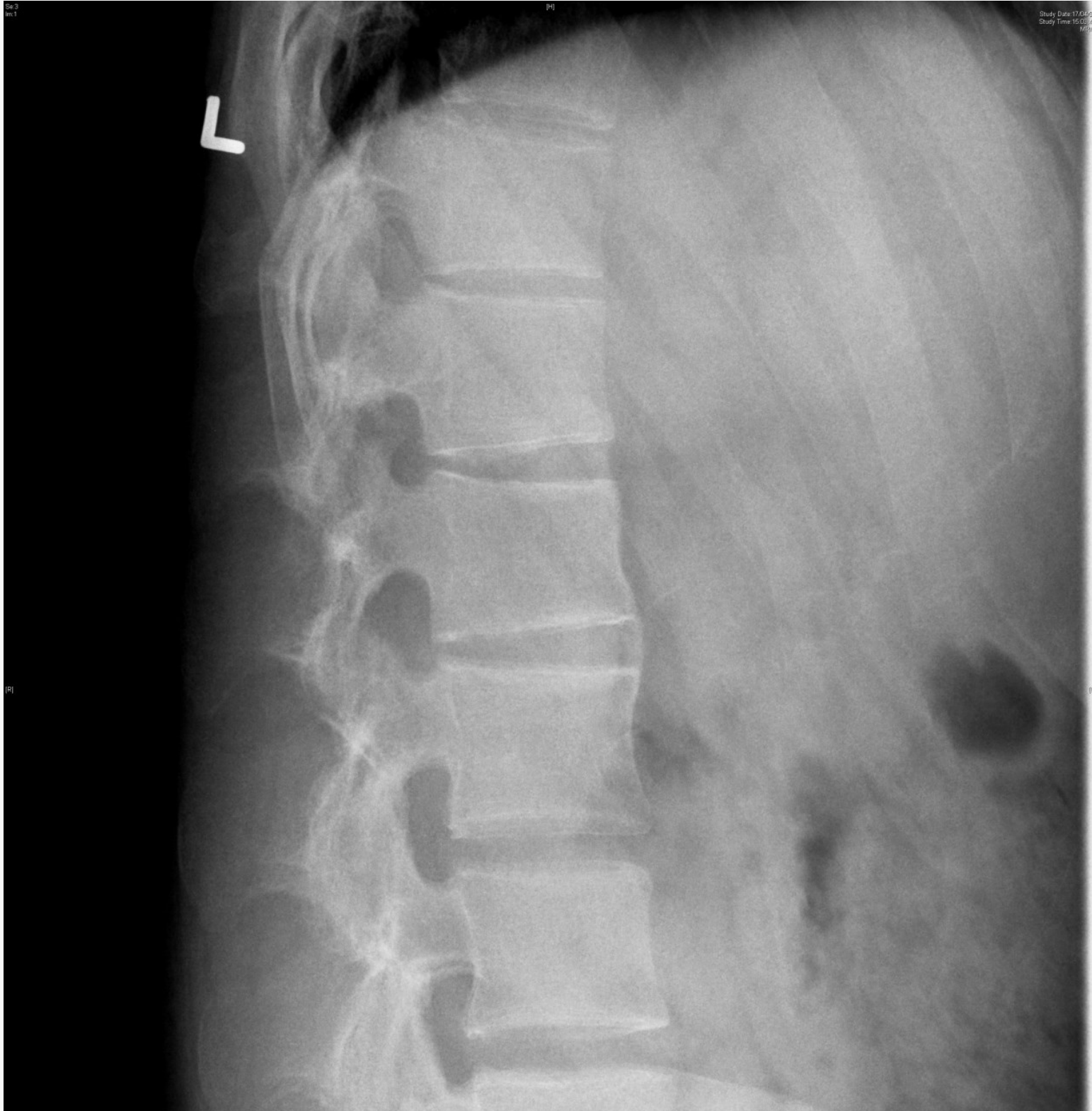
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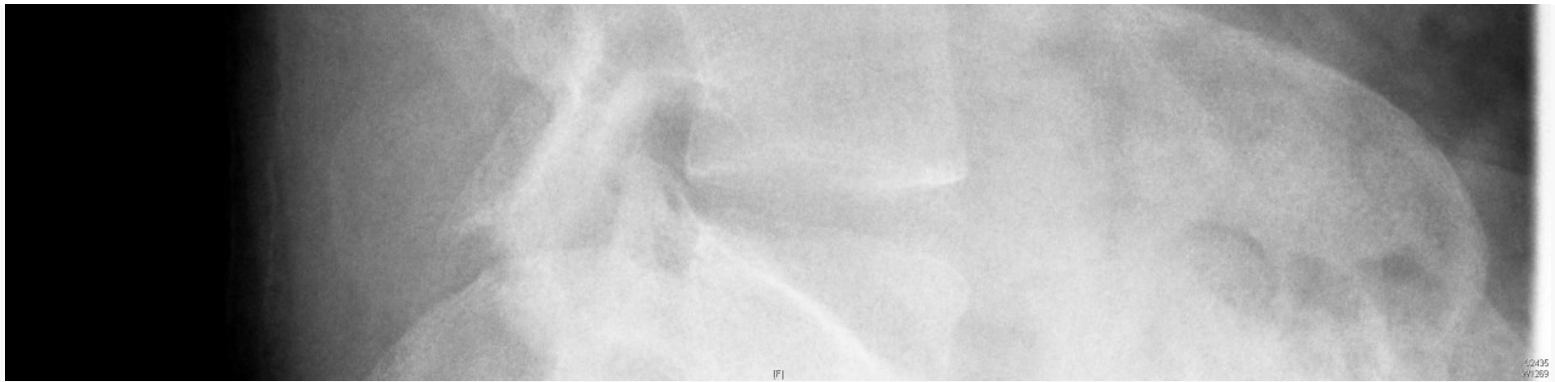
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Study Time: 15:03:40
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□ Question 29 of 94



A 32-year-old gentleman presented to his GP with an 8-week history of debilitating pain in his oral cavity and in his groin area. He had presented on numerous occasions to his GP with episodes of tiredness and non-specific malaise which each time was put down to non-specific viral illness. Eight months ago he was investigated by a gastroenterologist having presented with bloody diarrhoea and abdominal pain. He was diagnosed with a non-specific colitis of unknown origin which resolved spontaneously. He also suffered a solitary DVT of his left leg 6 years ago which was treated with oral anticoagulation. He smoked 20 cigarettes per day and consumed 20 units of alcohol per week. He was on no regular medication. Upon specific questioning, he denied joint pain or swelling. He also denied the presence of back pain. He was unaware of any family history as he was adopted from birth.

On examination, he appeared pale. His heart rate was 88 and blood pressure 118/78 mmHg. Examination of his cardiovascular system was unremarkable. Examination of his abdomen was likewise unremarkable. Examination of his oral mucosa revealed the presence of multiple aphthous ulceration. Examination of his external genitalia likewise revealed the presence of multiple shallow ulcers within his groin region. Examination of his joints was unremarkable.

Initial investigations revealed the following results:

Hb	139 g/l
Platelets	$333 \times 10^9/l$
WBC	$5.1 \times 10^9/l$
ESR	22 mm/hr
CRP	28 mg/l
Rheumatoid factor	negative
Anti CCP	negative
ANA	negative
HLA B27	positive

What is the most likely underlying diagnosis?

	Seronegative arthritis
	Disseminated gonococcal infection
	Crohn's disease
	Coeliac disease
	Behcet's syndrome

Dashboard

Overall score: 0%

1 -

□ Question 29 of 94



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	Behcet's syndrome

Dashboard

Overall score: **0%**
1 -

Question 30 of 94

□ □

A 23-year-old Sri Lankan male presents with 6 months of gradual onset low back pain, worse before waking. He describes increasing stiffness in his right wrist and left third metacarpal joints. On examination, you note reduced spinal movements in lateral spinal flexion and rotation and a positive Schober's test. He has not received any previous treatments for his back pain and has no other past medical history. What is the most appropriate initial management?

<input type="checkbox"/>	Start sulphasalazine
<input type="checkbox"/>	Start infliximab
<input type="checkbox"/>	Start etanercept
<input type="checkbox"/>	Physiotherapy and NSAIDs
<input type="checkbox"/>	No treatment

Dashboard

Overall score: 0%

1 -

Question 30 of 94

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	Physiotherapy and NSAIDs
	No treatment

Dashboard

Overall score: **0%**

1 -

Question 30 of 94

□ □

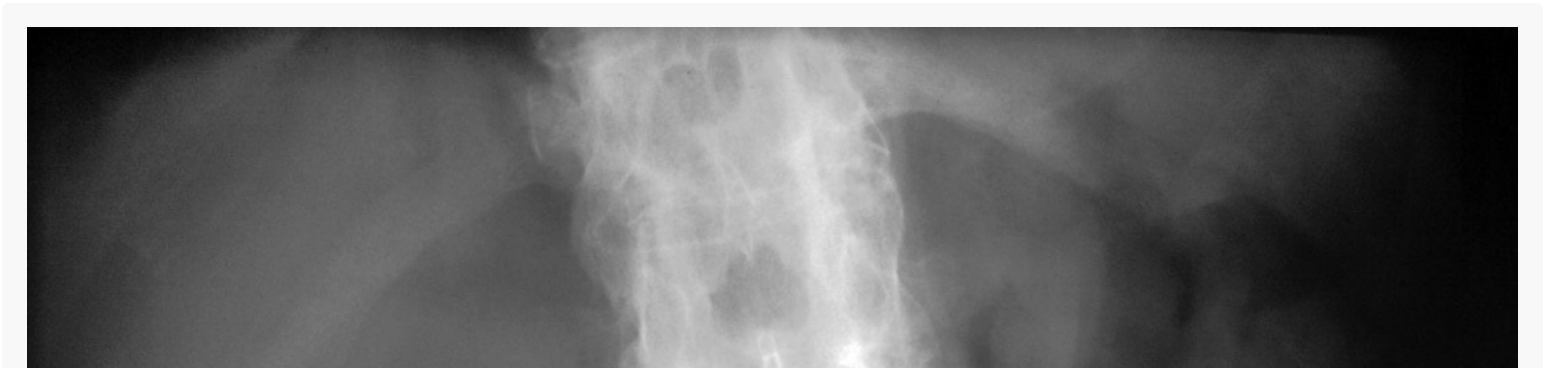
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Dashboard

Overall score: **0%**

1 -







□ Question 30 of 94

□ □

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Dashboard

Overall score: 0%

1 -



□ Question 30 of 94

□ □

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	No treatment

Dashboard

Overall score: **0%****1** -



□ Question 31 of 94



A 45-year-old Caucasian man presents with an acutely painful left knee. He is unable to mobilise due to the pain and swelling. Prior to this episode, the patient states that he is generally active, often enjoying a round of golf every Sunday. Last week he had a minor fall onto both knees whilst clearing out the garage. He puts his current symptoms down to general aches and pain of 'old age'.

The patient has also noticed that he is waking up more often in the night to pass urine. His wife has noticed that he is looking more 'tanned' despite them not going abroad on holiday this year. On further questioning, he admits to drinking 5-6 pints of ale per week. He is a non-smoker.

On examination on the Medical Assessment Unit you note significant left sided knee swelling. The joint is hot and tender to touch. There is no evidence of any surrounding skin changes.

His random glucose is measured at 18mmol/L.

Further blood tests are shown below:

Hb	138 g/l
Platelets	$120 \times 10^9/l$
WBC	$7.0 \times 10^9/l$

Na ⁺	138 mmol/l
K ⁺	4.0 mmol/l
Urea	6.2 mmol/l
Creatinine	88 μ mol/l
CRP	72 mg/L

What is the most likely cause of his acutely swollen knee?

--	--

	Pseudogout
	Ruptured Baker's cyst
	Septic arthritis
	Gout
	Haemarthrosis

Dashboard

Overall score: **0%**

1 -

Question 31 of 94



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	Pseudogout
	Ruptured Baker's cyst
	Septic arthritis
	Gout
	Haemarthrosis

Dashboard

Overall score: **0%**
1 -

□ Question 32 of 94



A 35-year-old lady with diffuse systemic sclerosis attends the rheumatology clinic. She has had worsening arthralgia over the last 2 months, mainly in the hands and feet. She does not complain of any other symptoms.

On examination her blood pressure is 161/94 mmHg, her heart rate is 90 beats per minute and her oxygen saturations are 96% on room air. She has sclerodactyly and tender small joints of the hands and feet with mild swelling. The hands are pale and cool. Her chest is clear.

Her blood tests are as follows:

Hb	110 g/l	Na ⁺	136 mmol/l	Bilirubin	5 µmol/l
Platelets	210 * 10 ⁹ /l	K ⁺	4.7 mmol/l	ALP	90 u/l
WBC	10 * 10 ⁹ /l	Urea	5 mmol/l	ALT	21 u/l
Neuts	7 * 10 ⁹ /l	Creatinine	89 µmol/l	γGT	30 u/l
Lymphs	2.5 * 10 ⁹ /l	ESR	99 mm/h	Albumin	32 g/l

Which drug should be used with caution in this patient?

	Tacrolimus
	Azathioprine
	Methotrexate
	Mycophenolate mofetil
	Prednisolone

Overall score: **0%**

1 -

□ Question 32 of 94



A 35-year-old lady with diffuse systemic sclerosis attends the rheumatology clinic. She has had worsening arthralgia over the last 2 months, mainly in the hands and feet. She does not complain of any other symptoms.

On examination her blood pressure is 161/94 mmHg, her heart rate is 90 beats per minute and her oxygen saturations are 96% on room air. She has sclerodactyly and tender small joints of the hands and feet with mild swelling. The hands are pale and cool. Her chest is clear.

Her blood tests are as follows:

Hb	110 g/l	Na ⁺	136 mmol/l	Bilirubin	5 µmol/l
Platelets	210 * 10 ⁹ /l	K ⁺	4.7 mmol/l	ALP	90 u/l
WBC	10 * 10 ⁹ /l	Urea	5 mmol/l	ALT	21 u/l
Neuts	7 * 10 ⁹ /l	Creatinine	89 µmol/l	γGT	30 u/l
Lymphs	2.5 * 10 ⁹ /l	ESR	99 mm/h	Albumin	32 g/l

Which drug should be used with caution in this patient?

	Tacrolimus
	Azathioprine
	Methotrexate
	Mycophenolate mofetil
	Prednisolone

Overall score: **0%**

1 -

Question 32 of 94

A 35-year-old lady with diffuse systemic sclerosis at onset over the last 2 months, mainly in the hands and feet.

On examination her blood pressure is 161/94 mmHg, oxygen saturation is 96% on room air. She has sclerodactyly and her fingers are pale and cool. Her chest is clear.

Her blood tests are as follows:

Hb	110 g/l	Na ⁺	136 mmol/l		
Platelets	210 * 10 ⁹ /l	K ⁺	4.7 mmol/l		
WBC	10 * 10 ⁹ /l	Urea	5 mmol/l		
Neuts	7 * 10 ⁹ /l	Creatinine	89 µmol/l	γGT	30 u/l
Lymphs	2.5 * 10 ⁹ /l	ESR	99 mm/h	Albumin	32 g/l



Which drug should be used with caution in this patient?

	Tacrolimus
	Azathioprine
	Methotrexate
	Mycophenolate mofetil
	Prednisolone

Overall score: **0%**

1 -

Question 32 of 94

A 35-year-old lady with diffuse systemic sclerosis at over the last 2 months, mainly in the hands and feet

On examination her blood pressure is 161/94 mmHg, oxygen saturations are 96% on room air. She has sclerodactyly and her fingers are pale and cool. Her chest is clear.

Her blood tests are as follows:

Hb	110 g/l	Na ⁺	136 mmol/l	LDH	1200 u/l
Platelets	210 * 10 ⁹ /l	K ⁺	4.7 mmol/l	Urea	5 mmol/l
WBC	10 * 10 ⁹ /l	Creatinine	89 µmol/l	γGT	30 u/l
Neuts	7 * 10 ⁹ /l	ESR	99 mm/h	Albumin	32 g/l
Lymphs	2.5 * 10 ⁹ /l				



Which drug should be used with caution in this patient?

<input type="radio"/>	Tacrolimus
<input type="radio"/>	Azathioprine
<input type="radio"/>	Methotrexate
<input type="radio"/>	Mycophenolate mofetil
<input checked="" type="radio"/>	Prednisolone

Overall score: **0%**

1 -

Question 32 of 94

A 35-year-old lady with diffuse systemic sclerosis at onset over the last 2 months, mainly in the hands and feet.

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Her blood tests are as follows:

Hb	110 g/l	Na ⁺	136 mmol/l	LDH	120 U/l
Platelets	210 * 10 ⁹ /l	K ⁺	4.7 mmol/l	Urea	5 mmol/l
WBC	10 * 10 ⁹ /l	Creatinine	89 µmol/l	γGT	30 u/l
Neuts	7 * 10 ⁹ /l	ESR	99 mm/h	Albumin	32 g/l
Lymphs	2.5 * 10 ⁹ /l				



Which drug should be used with caution in this patient?

<input type="checkbox"/>	Tacrolimus
<input type="checkbox"/>	Azathioprine
<input type="checkbox"/>	Methotrexate
<input type="checkbox"/>	Mycophenolate mofetil
<input checked="" type="checkbox"/>	Prednisolone

Overall score: **0%**

1 -

Question 33 of 94

You see a 48-year-old woman who presents with increasing pain whilst writing notes in her new job as a secretary. She describes a pain in her upper forearm which develops whilst she is writing. This is only relieved when she stops writing and it progresses through the working day. On examination, she has elbow pain with wrist dorsiflexion and middle finger extension. There is no weakness. What is the most likely diagnosis?

<input type="checkbox"/>	Osteoarthritis
<input type="checkbox"/>	Olecranon bursitis
<input type="checkbox"/>	Carpal tunnel syndrome
<input type="checkbox"/>	Tennis elbow
<input type="checkbox"/>	Golfer's elbow

Dashboard

Overall score: **0%**

1 -

Question 33 of 94

You see a 48-year-old woman who presents with increasing pain whilst writing notes in her new job as a secretary. She describes a pain in her upper forearm which develops whilst she is writing. This is only relieved when she stops writing and it progresses through the working day. On examination, she has elbow pain with wrist dorsiflexion and middle finger extension. There is no weakness. What is the most likely diagnosis?

	Osteoarthritis
	Olecranon bursitis
	Carpal tunnel syndrome
	Tennis elbow
	Golfer's elbow

Dashboard

Overall score: **0%**

1 -

Question 34 of 94



A 48-year-old woman presents with progressively worsening pain in the right shoulder over the past few weeks. She is generally fit and well but smokes 20 cigarettes/day.

On examination there is diffuse mild tenderness over the lateral aspect of the right shoulder. The pain is recreated when abducting the shoulder to around 70-80 degrees.

A shoulder x-ray is requested:



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What is the most likely diagnosis?

	Pancoast tumour
	Supraspinatus tendonitis
	Adhesive capsulitis
	Humeral head fracture
	Avascular necrosis

Dashboard

Overall score: **0%**

1 -

□ Question 34 of 94



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Dashboard

Overall score: **0%**
1 -

□ Question 35 of 94



A 55-year-old man is referred to rheumatology for management of severe tophaceous gout. The patient had been experiencing intermittent gout attacks over the previous few years, typically affecting the first metatarsophalangeal joints of both feet. However, during the last two months the patient had developed inflammation of multiple small joints of his hand preventing the patient from continuing his work as a train driver. A trial of Colchicine prescribed by the patient's General Practitioner had been discontinued after the patient experienced severe diarrhoea. Past medical history included an upper GI bleed secondary to a duodenal ulcer six months previously.

Examination demonstrated severe asymmetrical inflammation of multiple metacarpalphalangeal, distal interphalangeal and proximal interphalangeal joints across both hands. Yellow-white tophi were present across the inflamed joints. Blood tests taken prior to clinic attendance are listed below.

Hb	15.2 g/dl
Platelets	$265 \times 10^9/l$
WBC	$6.5 \times 10^9/l$

Na ⁺	134 mmol/l
K ⁺	4.2 mmol/l
Urea	9.5 mmol/l
Creatinine	175 μ mol/l
eGFR	62 ml/min
Urate	370 μ mol/l

What is the best treatment for this patient's acute gout?

	Intra-articular steroid injection
	Naproxen

	Allopurinol
	Febuxostat
	Short course prednisolone

Dashboard

Overall score: **0%**

1 -

□ Question 35 of 94



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Dashboard

Overall score: **0%**
1 -

Question 36 of 94



A 35-year-old female with a past medical history of sinusitis and asthma for four years is admitted with a pyrexia, worsening of dyspnoea and ankle swelling. Two weeks prior to admission she had noticed blood streaks were present in her sputum.

On examination she had widespread wheeze and bi-basal crepitations on auscultation of her chest. Her saturations are 94% without oxygen but come up to 99% after treatment with salbutamol and ipratropium bromide nebulisers and oxygen therapy.

She has a heart rate of 112 beats per minute, normal heart sounds and a raised JVP. She has pitting oedema up to her knees. Examination of her abdominal system is unremarkable.

Haemoglobin	102 g/L
White cell count	$11.2 \times 10^9/\text{L}$
Eosinophil count	$1.9 \times 10^9/\text{L}$
Platelet count	$478 \times 10^9/\text{L}$
International normalised ratio	1.3

Serum sodium	135 mmol/L
Serum potassium	5.5 mmol/L
Serum urea	21 mmol/L
Serum creatinine	211 mol/L
CRP	22 mg/l
Blood cultures	Coagulase-negative staphylococci
ANCA positive	immunostaining awaited

Urine dip- positive for protein and blood

CXR: Bi-basal non specific shadowing

What is the most likely diagnosis?

	Churg Strauss syndrome
	Systematic Inflammatory Response Syndrome
	Systematic Lupus Erythematosus
	Wegeners granulamatosiis
	Microscopic polyangiitis

Dashboard

Overall score: 0%

1 -

Question 36 of 94



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Dashboard

Overall score: **0%**

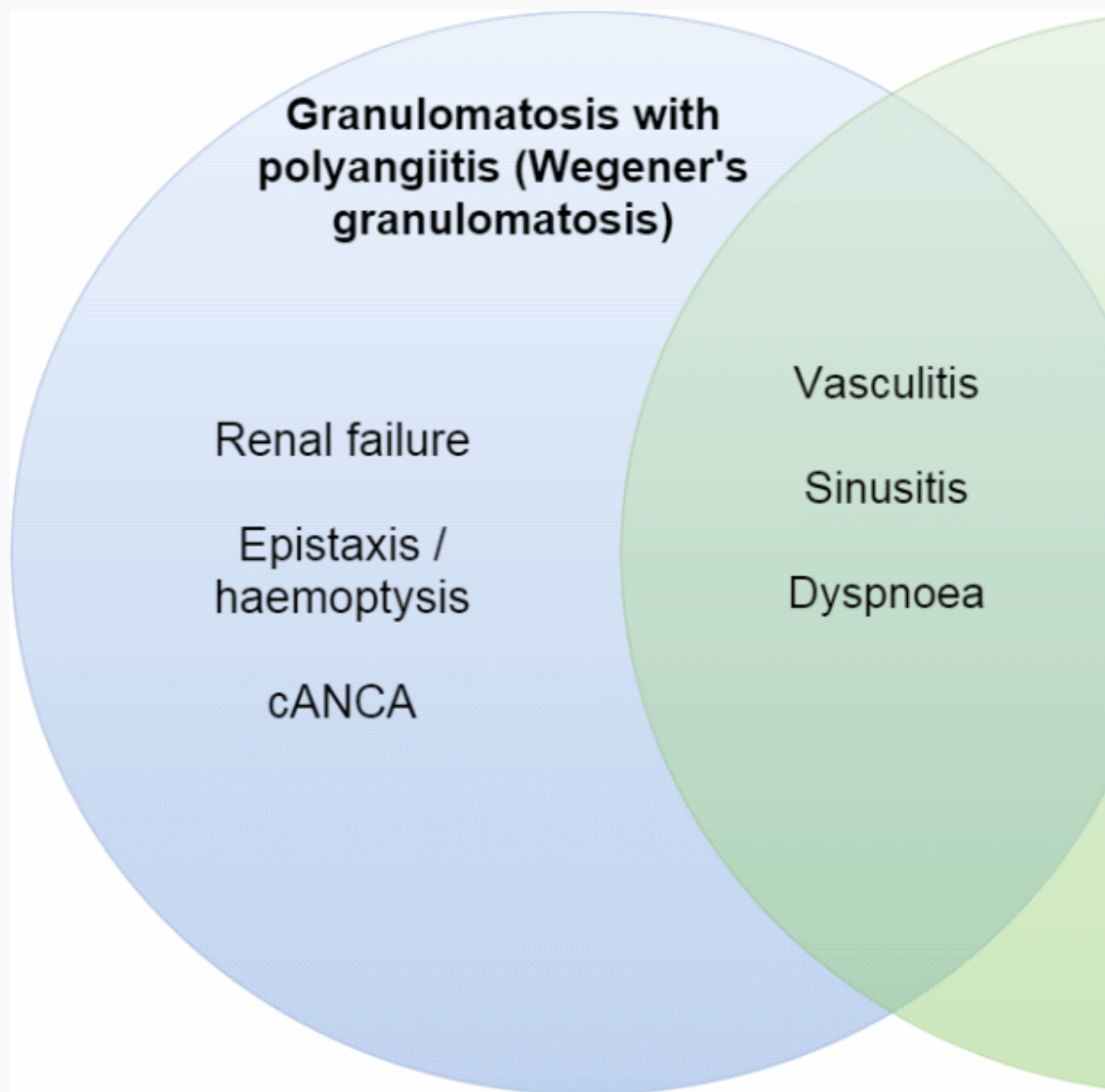
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Question 36 of 94

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Dashboard

Overall score: **0%**

1 -

□ Question 37 of 94



A 65 year old man presented to his General Practitioner with a 3 month history of bilateral shoulder aches and pains. The symptoms were associated with stiffness in the mornings taking up to two hours to resolve after waking. The patient denied any symptoms of headache, jaw claudication or visual disturbance. The patient had no symptoms of dry eyes or mouth, no skin or hair changes, no weight loss and no fevers.

Past medical history included hypertension and chronic obstructive pulmonary disease. Regular medications included ramipril, simvastatin and inhaled salbutamol as required. The patient was an ex-smoker who drank 25 units of alcohol per week. The patient had recently retired having spent his working life as a train driver.

Examination did not reveal any inflamed joints excepting slight tenderness across the shoulder girdle. There was no evidence of scalp tenderness. Cardiovascular and respiratory examination was unremarkable.

Investigations requested by the General Practitioner are listed below.

Haemoglobin	134 g / dL
White cell count	$7.5 \times 10^9/\text{L}$
Neutrophils	$6.0 \times 10^9/\text{L}$
Platelets	$356 \times 10^9/\text{L}$
Urea	8.9 mmol / L
Creatinine	110 micromol / L
Sodium	132 mmol / L
Potassium	4.9 mmol / L
Erythrocyte sedimentation rate	85 mm / h
Rheumatoid factor	Negative
Creatinine kinase	121 U / L (reference 5-130)
Calcium (adjusted)	2.25 mmol / L (reference 2.18-2.58)

Alkaline phosphatase	67 U / L (reference 35-100)
Thyroid stimulating hormone	2.5 microU / L
Protein electrophoresis	Normal

What is the appropriate next management step for this patient?

	Stop statin therapy and review in 6 weeks
	Ultrasound study of shoulders and hips
	Referral for specialist rheumatology opinion
	Prednisolone 15 mg daily with dose tapering over 2 years
	Prednisolone 40 mg daily with dose tapering over 1 year

Dashboard

Overall score: 0%

1 -

□ Question 37 of 94



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Dashboard

Overall score: 0%

1 -

□ Question 38 of 94



A 35-year-old woman presents to rheumatology clinic with a 2-month history of symmetrical swelling of the ankles and fingers. She also complains of joint pain and stiffness. The stiffness is primarily worse in the early morning and eases with use. Apart from a recent sore throat, she is otherwise well. She has a family history of type 1 diabetes mellitus. She does not take any prescribed medication but has found herself relying on over-the-counter analgesics to get through the day.

On examination, she has bilateral swelling of the index, ring and middle fingers and bilateral ankle swelling. She has a full range of movement in the fingers, wrists and ankles. There is marked swelling and tenderness to palpation at the distal interphalangeal joints in the index, middle and ring fingers on both sides. There are no skin changes, but yellowing and pitting of the nails are noted.

Blood tests show:

Hb	11.1 g/dl
Platelets	$305 \times 10^9/l$
WBC	$7.8 \times 10^9/l$

Na ⁺	141 mmol/l
K ⁺	4.2 mmol/l
Urea	5.8 mmol/l
Creatinine	64 μ mol/l

Bilirubin	13 μ mol/l
ALP	83 u/l
ALT	15 u/l
ESR	50mm/hr
CRP	39 mg/L

Rheumatoid factor	negative

Hand X-ray shows mild erosion at the distal interphalangeal joints of the index, middle and ring fingers on both hands.

What is the diagnosis?

	Rheumatoid arthritis
	Reiters syndrome
	Ankylosing spondylitis
	Yellow nail syndrome
	Psoriatic arthritis

Dashboard

Overall score: 0%

1 -

□ Question 38 of 94



A 35-year-old woman presents to rheumatology clinic with a 2-month history of symmetrical swelling of the ankles and fingers. She also complains of joint pain and stiffness. The stiffness is primarily worse in the early morning and eases with use. Apart from a recent sore throat, she is otherwise well. She has a family history of type 1 diabetes mellitus. She does not take any prescribed medication but has found herself relying on over-the-counter analgesics to get through the day.

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	Yellow nail syndrome
	Psoriatic arthritis

Dashboard

Overall score: **0%**

1 -

Question 38 of 94

A 35-year-old woman presents to rheumatology clinic with bilateral swelling of the fingers. She also complains of joint pain and stiffness with use. Apart from a recent sore throat, she is otherwise well. She does not take any prescribed medication but has been taking paracetamol for pain.

On examination, she has bilateral swelling of the metacarpophalangeal joints, full range of movement in the fingers, wrists and ankles. Bilateral distal interphalangeal joints in the index, middle and ring fingers and pitting of the nails are noted.

Blood tests show:

Hb	11.1 g/dl
Platelets	$305 \times 10^9/l$
WBC	$7.8 \times 10^9/l$

Na ⁺	141 mmol/l
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What is the diagnosis?

	Rheumatoid arthritis
	Reiters syndrome
	Ankylosing spondylitis
	Yellow nail syndrome
	Psoriatic arthritis

Dashboard

Overall score: **0%**

1 -

Question 38 of 94

A 35-year-old woman presents to rheumatology clinic with bilateral swelling of the proximal interphalangeal joints of her fingers. She also complains of joint pain and stiffness with use. Apart from a recent sore throat, she is otherwise well. She does not take any prescribed medication but has been taking paracetamol for pain day.

On examination, she has bilateral swelling of the proximal interphalangeal joints in the fingers, wrists and ankles. There is no full range of movement in the fingers, wrists and ankles. There is no redness or warmth over the joints. Pitting of the nails are noted.

Blood tests show:

Hb	11.1 g/dl
Platelets	$305 \times 10^9/l$
WBC	$7.8 \times 10^9/l$

Na ⁺	141 mmol/l
K ⁺	4.2 mmol/l
Urea	5.8 mmol/l
Creatinine	64 µmol/l

Bilirubin	13 µmol/l
ALP	83 u/l
ALT	15 u/l
ESR	50mm/hr
CRP	39 mg/L



Rheumatoid factor	negative
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Hand X-ray shows mild erosion at the distal interphalangeal joints of the index, middle and ring fingers on both hands.

What is the diagnosis?

	Rheumatoid arthritis
	Reiters syndrome
	Ankylosing spondylitis
	Yellow nail syndrome
	Psoriatic arthritis

Dashboard

Overall score: **0%**

1 -

□ Question 38 of 94



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	Rheumatoid arthritis
	Reiters syndrome
	Ankylosing spondylitis
	Yellow nail syndrome
	Psoriatic arthritis

Dashboard

Overall score: **0%**

1 -



□ Question 39 of 94



A 8-year-old boy is complains of progressively worsening pain in both groin areas. He has no past medical history of note and his immunisations are up-to-date. There is no recent history of trauma. On examination he walks with a limp. An x-ray is requested:



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What is the most likely diagnosis?

	Developmental dysplasia of the hip
	Slipped upper femoral epiphysis

	Osteosarcoma
	Acute lymphoblastic leukaemia
	Perthes disease

Dashboard

Overall score: **0%**

1 -

□ Question 39 of 94



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	Osteosarcoma
	Acute lymphoblastic leukaemia
	Perthes disease

Dashboard

Overall score: **0%**
1 -

□ Question 39 of 94

A 8-year-old boy is complains of progressive limp and his immunisations are up-to-date. The following x-ray is requested:



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What is the most likely diagnosis?

Developmental dysplasia of the hip

Slipped upper femoral epiphysis

	Osteosarcoma
	Acute lymphoblastic leukaemia
	Perthes disease

Dashboard

Overall score: **0%**
1 -

□ Question 39 of 94

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Dashboard

Overall score: **0%**
1 -



□ Question 40 of 94

□ □

A 62-year-old complains of a 6 month history of recurrent pains in both feet. His feet now seem constantly painful although he does go through periods where the pain gets even worse.

An x-ray is requested:



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	Gout
	Metastatic prostate cancer
	Osteoarthritis
	Rheumatoid arthritis
	Primary hyperparathyroidism

Dashboard

Overall score: 0%

1 -

□ Question 40 of 94

□ □

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Dashboard

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□ Question 40 of 94

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□ Question 40 of 94

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	Gout
	Metastatic prostate cancer
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	Rheumatoid arthritis
	Primary hyperparathyroidism

Dashboard

Overall score: **0%**

1 -



□ Question 41 of 94



A 77-year-old lady is reviewed in the Rheumatology Clinic with a 4-week history of malaise and bilateral hip pain.

The pain is poorly localised and affects the anterior and posterior aspects of the pelvis as well as the upper thighs. It is typically worse in the mornings and associated with feelings of stiffness that take several hours to improve.

She also reports the recent onset of a right-sided headache, which is constant and has been present for the past 2 weeks. 24 hours ago, she developed an episode of transient visual darkening although she is unable to recall which eye was affected.

Her past medical history is remarkable for hypertension and hypothyroidism. Her regular medications include amlodipine 5mg once daily and levothyroxine 75 micrograms once daily.

On examination, her visual acuity is 6/9 in both eyes. Her temperature is 37.3°C, her pulse is 73bpm and her blood pressure is 143/81mmHg. Neurological examination reveals no focal abnormality although the pulsation of her right temporal artery is difficult to feel.

Her blood results are as follows:

Hb	124 g/l	Na ⁺	141 mmol/l
Platelets	444 * 10 ⁹ /l	K ⁺	3.9 mmol/l
WBC	11.2 * 10 ⁹ /l	Urea	4.3 mmol/l
Neuts	8.1 * 10 ⁹ /l	Creatinine	78 µmol/l
Lymphs	2.3 * 10 ⁹ /l	CRP	102 mg/l
Eosin	0.02 * 10 ⁹ /l		

A temporal artery biopsy is performed and a 0.8cm sample is obtained. It is reported as being 'negative for giant cell arteritis (GCA)'.

What is the most appropriate treatment strategy?

	IV methylprednisolone 1 gram once daily
	Prednisolone 15mg once daily
	Amitriptyline 10mg once daily
	Explanation, reassurance and referral to physiotherapy for graded aerobic exercise
	Prednisolone 60mg once daily

Dashboard

Overall score: 0%

1 -

□ Question 41 of 94



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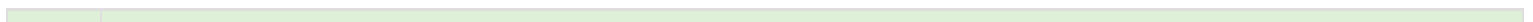
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	Explanation, reassurance and referral to physiotherapy for graded aerobic exercise
	Prednisolone 60mg once daily

Dashboard

Overall score: **0%**
1 -

□ Question 42 of 94

□ □

A 30 year old lady with rheumatoid arthritis, presents feeling unwell. She has felt lethargic for the last two days and over the last 24 hours has developed a severe sore throat. She has been on the following prescription for the last six months; paracetamol 1g QDS, naproxen 500mg PRN, methotrexate 15mg once weekly, folic acid 5mg once weekly and prednisolone 5mg OD. She is septic on examination with observations as follows: respiratory rate 26/min, heart rate 120/min, blood pressure 100/67mmHg, temperature 37.9°C. She is tolerating oral fluids and small amounts of food. Adequate fluid resuscitation and antibiotics are started. With regards to her regular medications what should be done?

	Hold methotrexate and half dose of prednisolone
	Hold methotrexate and increase prednisolone to 10mg once daily
	Half dose of methotrexate and increase prednisolone to 10mg once daily
	Refer to rheumatology for urgent review
	Hold methotrexate and start IV methylprednisolone

Dashboard

Overall score: 0%

1 -

□ Question 42 of 94



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	Refer to rheumatology for urgent review
	Hold methotrexate and start IV methylprednisolone

Dashboard

Overall score: **0%****1** -

□ Question 43 of 94



A 52-year-old man presents with lethargy and reduced sensation in both feet. He reports a 2 month history of fevers and 4kg weight loss. He also reports intermittent testicular pain.

On examination there is livedo reticularis on both legs and reduced light touch and pain sensation on both feet.

Blood tests reveal:

Hb	116 g/l	Na ¹³⁷	# mmol/l	Bilirubin	18 µmol/l
Platelets	487 * 10 ⁹ /l	K ⁺	4.8 mmol/l	ALP	92 u/l
WBC	8.3 * 10 ⁹ /l	Urea	12.8 mmol/l	ALT	102 u/l
Neuts	6.3 * 10 ⁹ /l	Creatinine	182 µmol/l	γGT	16 u/l
MCV	89 fL	ESR	78mm/hr	Albumin	35 g/l

What is the most likely diagnosis?

	Cryoglobulinaemia
	Granulomatosis with polyangiitis
	Eosinophilic granulomatosis with polyangiitis
	Polyarteritis nodosa
	Microscopic polyangiitis

Dashboard

Overall score: 0%

□ Question 43 of 94



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Blood tests reveal:

Hb	116 g/l	Na ¹³⁷	# mmol/l	Bilirubin	18 µmol/l
Platelets	487 * 10 ⁹ /l	K ⁺	4.8 mmol/l	ALP	92 u/l
WBC	8.3 * 10 ⁹ /l	Urea	12.8 mmol/l	ALT	102 u/l
Neuts	6.3 * 10 ⁹ /l	Creatinine	182 µmol/l	γGT	16 u/l
MCV	89 fL	ESR	78mm/hr	Albumin	35 g/l

What is the most likely diagnosis?

	Cryoglobulinaemia
	Granulomatosis with polyangiitis
	Eosinophilic granulomatosis with polyangiitis
	Polyarteritis nodosa
	Microscopic polyangiitis

Dashboard

Overall score: **0%**

Question 44 of 94

□ □

A 32 year old female with known rheumatoid arthritis presents to clinic and would like some advice. She would like to start a family with her partner. Her rheumatoid arthritis is current well-controlled on methotrexate and sulphasalazine, she has not required changing of doses for 2 years. She is reluctant to stop medications unless she has to, she had a number of flares when doses were reduced 3 years ago. What would you advice regarding her plans for pregnancy?

	She should reconsider her plans for pregnancy. Stopping medications would make her disease uncontrollable and continuing medications will affect her child
	Continue sulphasalazine and methotrexate
	Stop sulphasalazine, continue methotrexate
	Continue sulphasalazine and stop methotrexate
	Stop both sulphasalazine and methotrexate

Dashboard

Overall score: 0%

1 -

□ Question 44 of 94

□ □

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	Stop sulphasalazine, continue methotrexate
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	Stop both sulphasalazine and methotrexate

Dashboard

Overall score: **0%****1** -

☐ Question 45 of 94

A 62-year-old man with a diagnosis of Paget's disease is seen in clinic with a two month history of worsening bone pain, mainly in his left leg. His medications include paracetamol, ibuprofen, and alendronate.

Examination reveals marked deformity of the long bones, particularly the left tibia.

Blood tests:

Calcium	2.40 mmol/L (2.25-2.5)
Albumin	37g/L (34-54)
Corrected calcium	2.50 mmol/L (2.25-2.5)
Alkaline phosphatase	484 U/L (45-105)
Alanine transaminase	27 U/L (5-35)

What is the next stage in the treatment of this patient?

<input type="checkbox"/>	Cholecalciferol
<input type="checkbox"/>	Surgery
<input type="checkbox"/>	Calcitonin
<input type="checkbox"/>	Hearing aid
<input type="checkbox"/>	Prednisolone

Dashboard

Overall score: 0%

Question 45 of 94

□ □

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	Surgery
	Calcitonin
	Hearing aid
	Prednisolone

Dashboard

Overall score: **0%**

Question 45 of 94

□ □

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	Cholecalciferol
	Surgery
	Calcitonin
	Hearing aid
	Prednisolone

Overall score: **0%**

1 -



Question 45 of 94

□ □

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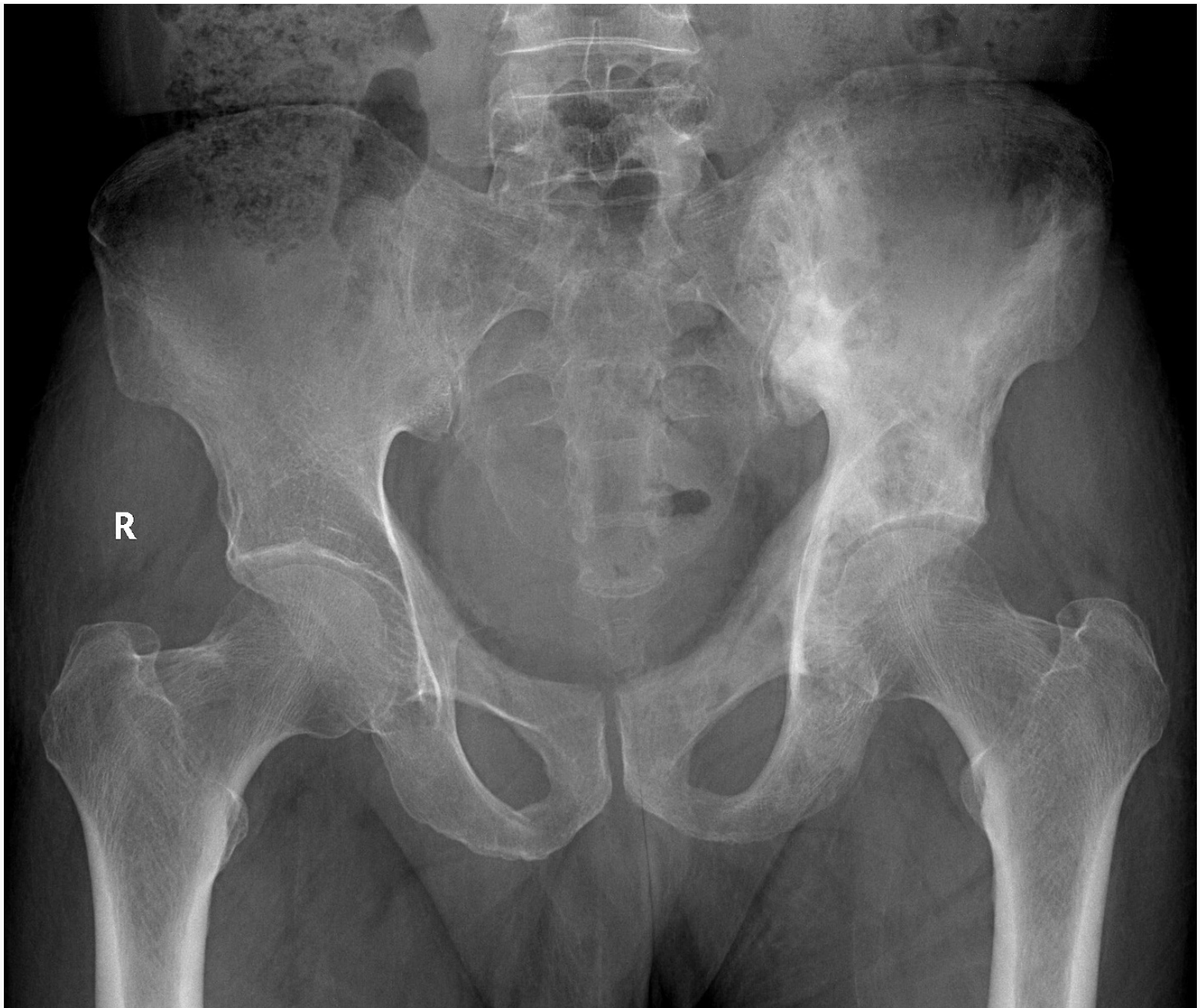
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What is the next stage in the treatment of this patient?

	Cholecalciferol
	Surgery
	Calcitonin
	Hearing aid
	Prednisolone

Overall score: **0%**

1 -



□ Question 46 of 94



A 36-year-old man presents with progressive lower back pain for the past six months. The pain is worse in the mornings and tends to ease with exercise and the passage of the day. He has tried paracetamol but this does not fully controlled his pain. An x-ray of his spine is shown below:



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What is the most appropriate first-line treatment

	Dietary restriction of phenylalanine and tyrosine
	Sulfasalazine
	Naproxen
	Vitamin D supplementation
	Infliximab

Dashboard

Overall score: 0%

1 -

□ Question 46 of 94



A 36-year-old man presents with progressive lower back pain for the past six months. The pain is worse in the mornings and tends to ease with exercise and the passage of the day. He has tried paracetamol but this does not fully controlled his pain. An x-ray of his spine is shown below:



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What is the most appropriate first-line treatment

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Dashboard

Overall score: 0%

1 -

□ Question 46 of 94

□ □

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© Image used on license from Radiopaedia



What is the most appropriate first-line treatment

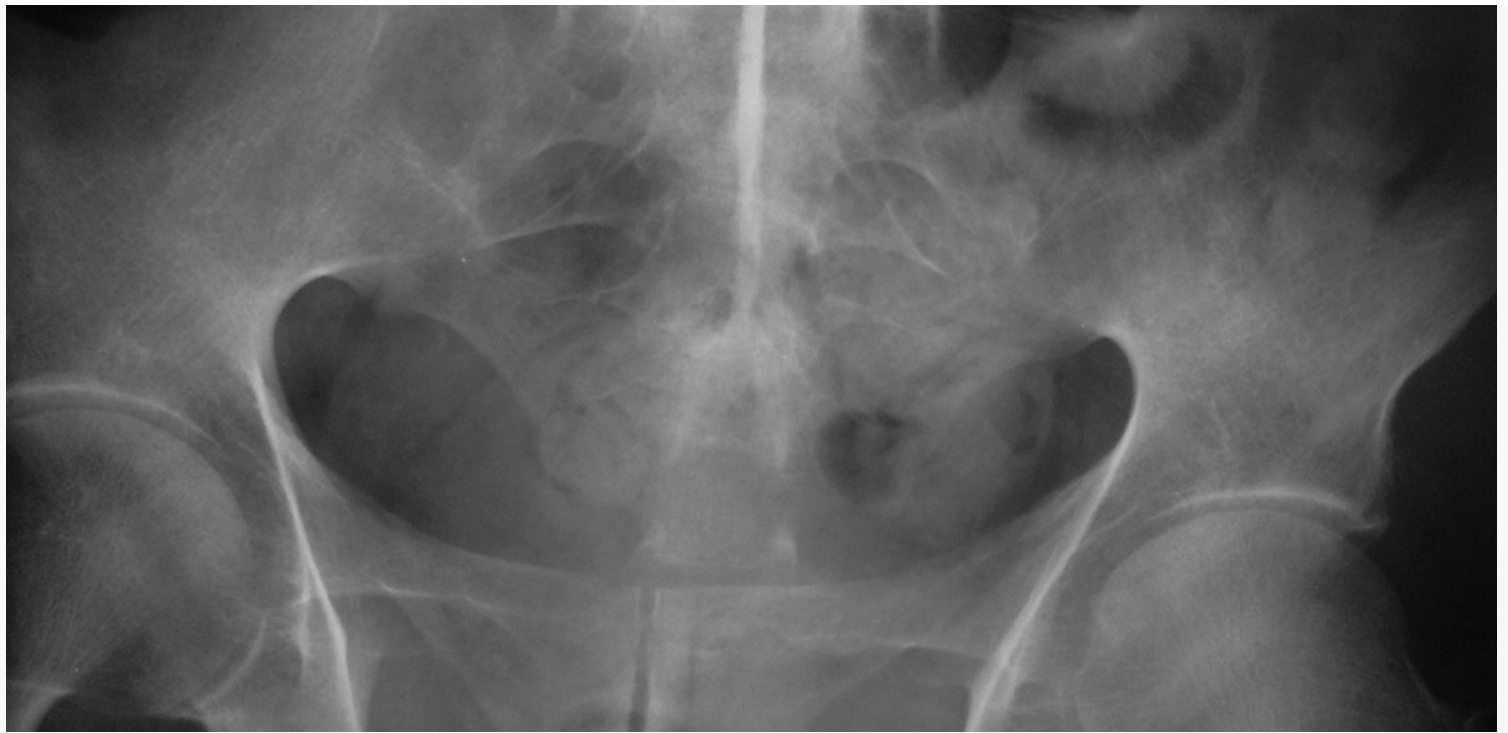
	Dietary restriction of phenylalanine and tyrosine
	Sulfasalazine
	Naproxen
	Vitamin D supplementation
	Infliximab

Dashboard

Overall score: **0%**

1 -





□ Question 46 of 94

□ □

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Dashboard

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1 -



Question 46 of 94



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□ Question 46 of 94

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Dashboard

Overall score: **0%**

1 -

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Study Time: 15:22:33
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□ Question 46 of 94

□ □

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© Image used on license from Radiopaedia

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	Sulfasalazine
	Naproxen
	Vitamin D supplementation
	Infliximab

Dashboard

Overall score: **0%**
1 -





□ Question 47 of 94



A 73-year-old woman attends rheumatology clinic for review of her osteoporosis treatment. The patient had been diagnosed with osteoporosis five years previously on a DEXA scan performed after she had sustained a fractured right neck of femur. Since the time of diagnosis, the patient had been receiving treatment with alendronic acid (70 mg weekly).

During clinic review, the patient reported taking her alendronic acid as prescribed without any associated side effects. A review of her past medical history revealed that the patient had sustained a left distal radius fracture the previous year following a trip at home. In addition, the patient had suffered from a deep vein thrombosis in her right leg three years before precipitated by a trans-continental flight and had been anti-coagulated with warfarin for six months.

The patient was a smoker (10 cigarettes per day) and also consumed around 20 units of alcohol per week. Her mother had suffered a fractured neck of femur at the age of 80. The patient had never been diagnosed with rheumatoid arthritis and had no significant exposure to corticosteroid treatment.

Clinical examination of the patient demonstrated no loss of height since previous measurement five years previously. There was no tenderness on palpation of the thoracic or lumbar spine.

Height	175 cm
Weight	95 kg
Femoral neck BMD (5 years previously)	T - 2.7
Femoral neck BMD (present day)	T - 2.9
FRAX 10-year probability of major osteoporotic fracture	60 %
FRAX 10-year probability of hip fracture	50 %

What is the appropriate management of the patient's osteoporosis?

	Stop treatment with alendronic acid and start treatment with denosumab
	Stop treatment with alendronic acid and start treatment with strontium ranelate

	Continue treatment with alendronic acid with repeat DEXA scan in five years
	Continue treatment with alendronic acid with repeat DEXA scan in two years
	Stop treatment with alendronic acid with repeat DEXA scan in two years

Dashboard

Overall score: 0%

1 -

□ Question 47 of 94



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	Continue treatment with alendronic acid with repeat DEXA scan in five years
	Continue treatment with alendronic acid with repeat DEXA scan in two years
	Stop treatment with alendronic acid with repeat DEXA scan in two years

Dashboard

Overall score: **0%**
1 -

□ Question 47 of 94



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What is the appropriate management of the patient's osteoporosis?

	Stop treatment with alendronic acid and start treatment with denosumab
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	Continue treatment with alendronic acid with repeat DEXA scan in five years
	Continue treatment with alendronic acid with repeat DEXA scan in two years

	Stop treatment with alendronic acid with repeat DEXA scan in two years
--	--

Dashboard

Overall score: **0%**
1 -



Question 48 of 94



A normally fit and well 32-year-old black woman complains of a fever and tiredness over the past month. Her temperature is 38.2°C, blood pressure is 115/70 mmHg, pulse is 75/min and respirations are 18/min.

On examination there were multiple non-tender cervical and axillary lymph nodes. Lung auscultation reveals fine crackles throughout bilaterally. A chest x-ray film demonstrated hilar lymphadenopathy with diffuse interstitial infiltrates. A subsequent lymph node biopsy showed non-caseating granulomas.

Which of the following is the most appropriate therapy?

	Supportive therapy
	Methotrexate
	Ciclosporin
	Glucocorticoids
	Infliximab

Dashboard

Overall score: 0%
1 -

Question 48 of 94

□ □

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	Supportive therapy
	Methotrexate
	Ciclosporin
	Glucocorticoids
	Infliximab

Dashboard

Overall score: **0%**

1 -

□ Question 49 of 94



A 39-year-old lady is referred to the acute medical clinic. She presents with a 3 weeks history of worsening shortness of breath and left-sided pleuritic chest pain. She denies a cough, sputum or haemoptysis. Her exercise tolerance, previously unlimited is now down to approximately 100 yards. She denies any weight loss but admits that she has been feeling hot and having fevers fairly regularly over the last 6 months. In addition, she complains of aches and pains in her knees and wrists for which she has been taking ibuprofen with reasonable effect. She is normally fit and well and on no regular medication. She is a non-smoker and drinks alcohol socially. She works as a secretary.

On examination she has a BMI of 21 kg/m², her temperature is 37.4°C and her blood pressure is 128/67 mmHg with a heart rate of 76/min. Her respiratory rate is 19/min and her oxygen saturations are 96% on air. She has some submandibular and sublingual lymphadenopathy. She has reduced air entry at her left base with a stony dull percussion note. Examination of her cardiovascular and abdominal systems are unremarkable, as is an examination of her wrists and knees. You notice she has a salmon pink rash across her chest and upon questioning she admits that it has been there for the last few weeks.

Her blood tests show:

Hb	109 g/l
Platelets	523 * 10 ⁹ /l
WBC	19.3 * 10 ⁹ /l
Neuts	14.5 * 10 ⁹ /l
ESR	30 mm/hr
Ferritin	2000 µg/l

Na ⁺	136 mmol/l
K ⁺	3.6 mmol/l
Urea	3.1 mmol/l
Creatinine	70 µmol/l

CRP	45 mg/l
-----	---------

Bilirubin	18 µmol/l
ALP	119 u/l
ALT	67 u/l
Albumin	34 g/l

Rheumatoid factor	negative
ANA	negative
Anti-histone antibodies	negative

She has a chest x-ray which shows a medium-sized left pleural effusion.

What is the likely cause of her symptoms?

<input type="checkbox"/>	Non-Hodgkin's lymphoma
<input type="checkbox"/>	Small cell lung cancer
<input type="checkbox"/>	Adult onset Stills disease
<input type="checkbox"/>	Rheumatoid arthritis
<input type="checkbox"/>	Mixed connective tissue disease

Dashboard

Overall score: **0%**

1 -

□ Question 49 of 94



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	Small cell lung cancer
	Adult onset Stills disease
	Rheumatoid arthritis
	Mixed connective tissue disease

Dashboard

Overall score: **0%**

1 -

Question 50 of 94



A 69-year-old man with a history of rheumatoid arthritis well controlled on methotrexate presents with gradual pain and swelling in his wrists and ankles.

The pain is described as a dull ache that is intermittent, often worse in the evenings. There is associated swelling which can sometimes feel warm. He has tried regular paracetamol but this has had limited effect.

He also describes a chronic cough and shortness of breath on exertion for the past 6 months that he has not mentioned to his GP. There has been no haemoptysis and he denies any fevers. His wife has noticed that he has been losing weight recently.

He has a past medical history of rheumatoid arthritis, hypertension, hypercholesterolaemia and type 2 diabetes mellitus. He currently takes methotrexate weekly, folic acid 5mg weekly, ramipril 5mg, simvastatin 20mg at night, metformin 500mg three times a day and paracetamol 1g four times daily.

He is a retired accountant and a current smoker with a 50 pack year smoking history. He drinks approximately 30 units of beer a week. He denies any recent foreign travel.

On examination, he is cachectic and short of breath on exertion. His pulse is 80/min and regular, blood pressure 140/93 mmHg, oxygen saturations of 93% on air. He has marked fingernail clubbing. Examination of his wrists reveals slightly swollen and tender joints. Swan neck and ulnar deviation deformities are noted in both hands. Other than his wrists, no other joint abnormalities are detected. Examination of the peripheral nervous system is normal.

Examination of his chest is normal with no focal consolidation.

Initial bloods are as follows:

Na ⁺	134 mmol/L
K ⁺	3.9 mmol/L
Urea	7.8 mmol/L
Creatinine	105 µmol/L
Hb	100 g/L

WBC	6.0x10 ⁹ /L
Platelets	200x10 ⁹ /L
LFTs	Normal
Serum uric acid	410 µmol/L
CRP	12 mg/L

Chest X-ray reveals a discrete opacification at the periphery of the right middle lobe.

What is the most likely cause of his joint pains?

<input type="checkbox"/>	Rheumatoid arthritis flare
<input type="checkbox"/>	Gout
<input type="checkbox"/>	Hypertrophic pulmonary osteoarthropathy secondary to bronchogenic carcinoma
<input type="checkbox"/>	Reiter's syndrome
<input type="checkbox"/>	Osteoarthritis

Dashboard

Overall score: **0%**

1 -

□ Question 50 of 94



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	Gout
	Hypertrophic pulmonary osteoarthropathy secondary to bronchogenic carcinoma
	Reiter's syndrome
	Osteoarthritis

Dashboard

Overall score: **0%**

1 -

□ Question 50 of 94

□ □

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Urea	7.8 mmol/L
Creatinine	105 µmol/L
Hb	100 g/L
WBC	$6.0 \times 10^9/\text{L}$
Platelets	$200 \times 10^9/\text{L}$
LFTs	Normal
Serum uric acid	410 µmol/L
CRP	12 mg/L

Chest X-ray reveals a discrete opacification at the periphery of the right middle lobe.

What is the most likely cause of his joint pains?

	Rheumatoid arthritis flare
	Gout
	Hypertrophic pulmonary osteoarthropathy secondary to bronchogenic carcinoma
	Reiter's syndrome
	Osteoarthritis

Dashboard

Overall score: **0%**

1 -



Question 51 of 94

□ □

A 28-year-old woman with systemic lupus erythematosus attends the pre-conception clinic. She would like some advice regarding her medications prior to getting pregnant. She has never been pregnant before and her lupus has been stable on her current medications: mycophenolate and hydroxychloroquine for over 12 months. She also has asthma, which is well controlled with beclomethasone and salbutamol inhalers, and she takes regular omeprazole for gastro-oesophageal reflux.

What is the most appropriate medication amendment?

	Half omeprazole dose
	Stop beclomethasone inhaler
	Stop hydroxychloroquine
	Add ramipril 1.25mg
	Change mycophenolate to azathioprine

Dashboard

Overall score: 0%

1 -

□ Question 51 of 94

□ □

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	Stop hydroxychloroquine
	Add ramipril 1.25mg
	Change mycophenolate to azathioprine

Dashboard

Overall score: **0%**

1 -

Question 52 of 94

A 30-year-old man presents to the Emergency Department with severe shortness of breath, cough and ongoing weight loss. He has a past medical history of asthma and nasal polyps.

He has seen his general practitioner (GP) 3 times in the last 6 months for chest infections and been given antibiotics.

Given the likely underlying diagnosis, what would you expect to see on his blood results?

<input type="checkbox"/>	Low lymphocyte count
<input type="checkbox"/>	Iron deficiency anaemia
<input type="checkbox"/>	Raised neutrophil count
<input type="checkbox"/>	Raised eosinophil count
<input type="checkbox"/>	Low platelet count

Dashboard

Overall score: 0%

1 -

□ Question 52 of 94

□ □

A 30-year-old man presents to the Emergency Department with severe shortness of breath, cough and ongoing weight loss. He has a past medical history of asthma and nasal polyps.

He has seen his general practitioner (GP) 3 times in the last 6 months for chest infections and been given antibiotics.

Given the likely underlying diagnosis, what would you expect to see on his blood results?

	Low lymphocyte count
	Iron deficiency anaemia
	Raised neutrophil count
	Raised eosinophil count
	Low platelet count

Dashboard

Overall score: **0%**

1 -

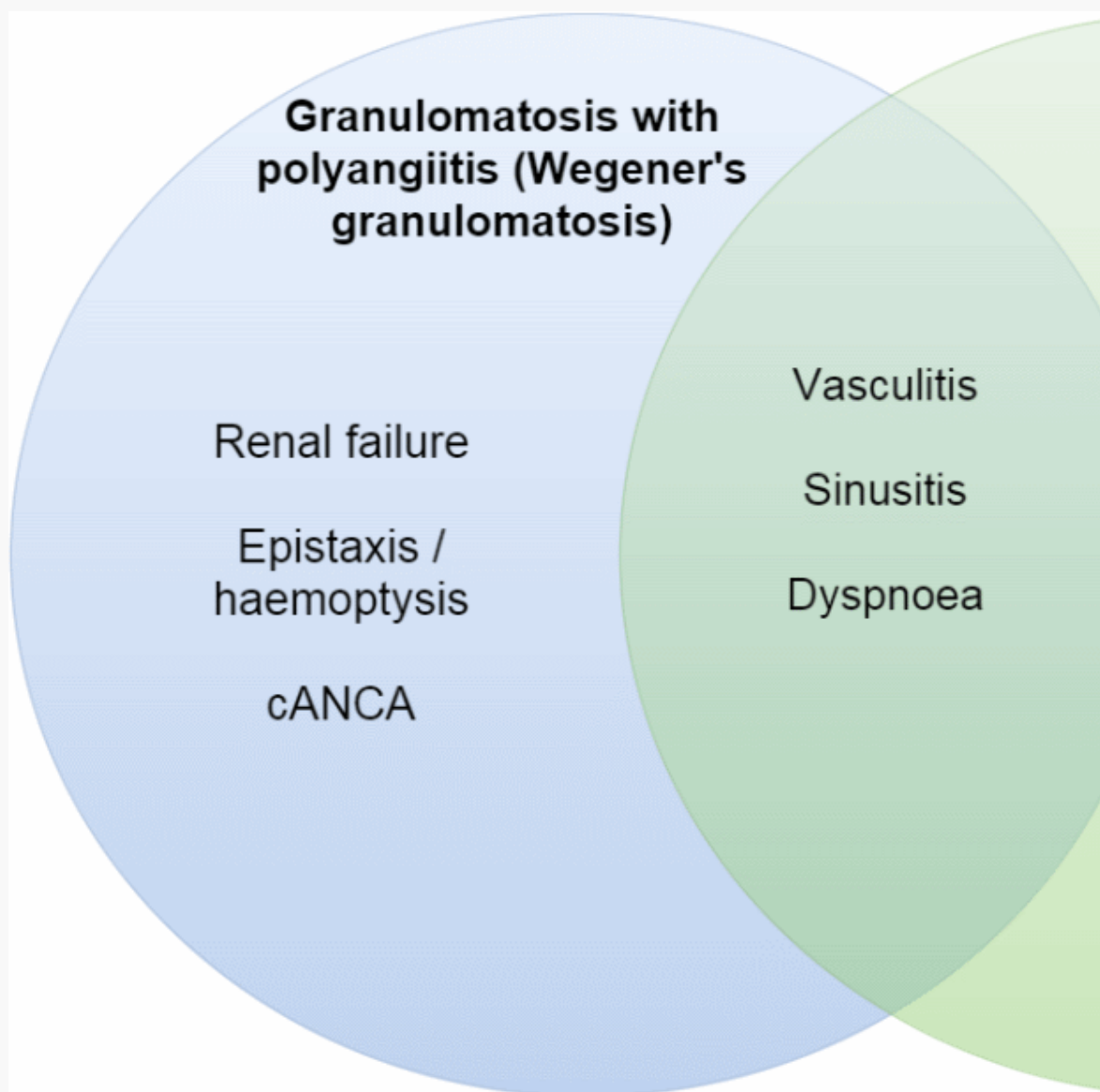
Question 52 of 94

A 30-year-old man presents with weight loss. He has a past medical history of asthma.

He has seen his general practitioner for a cough and haemoptysis.

Given the likely underlying condition, which of the following laboratory findings is most likely to be seen?

<input type="radio"/>	Low lymphocyte count
<input type="radio"/>	Iron deficiency anaemia
<input type="radio"/>	Raised neutrophil count
<input checked="" type="radio"/>	Raised eosinophil count
<input type="radio"/>	Low platelet count



Dashboard

Overall score: **0%**

1 -

Question 53 of 94



A 75 year old male presents to A&E with two episodes of loss of consciousness over the last 48 hours. Both episode were witnessed by his wife, onset while sitting in his chair at home, without any witnessed limb jerking, urinary incontinence or tongue biting. He denies any chest pain or shortness of breath normally but reports gradually being able to walk increasingly shorter distances, which he attributed to old age. He has no other significant past medical history, lives with his wife and is a lifelong non-smoker. On examination, he has a significant thoracic kyphosis. On flexion of the lower back, the marked distance increased from 15 cm to 18 cm. He also has a poverty of spinal lateral flexion and bilateral spinal rotation. His cardiovascular examination reveals heart sounds I and II with an early diastolic murmur. Respiratory examination reveals fine inspiratory crackles at both apices. His lying and standing blood pressures are unremarkable. A CT head demonstrated only mild microangiopathic disease. The patient is currently comfortable and alert, requesting to go home. He is attached to cardiac telemetry. What do you expect his ECG to show?

	Sinus bradycardia
	Trigeminy
	Fast atrial fibrillation with ventricular response greater than 100
	Atrial flutter
	Bradycardia with 1st degree heart block

Dashboard

Overall score: 0%

1 -

□ Question 53 of 94

□ □

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	Sinus bradycardia
	Trigeminy
	Fast atrial fibrillation with ventricular response greater than 100
	Atrial flutter
	Bradycardia with 1st degree heart block

Dashboard

Overall score: **0%****1** -

Question 54 of 94

□ □

An 11-year-old boy presents with a one-day history of pain in his left hip. He has 'niggling' pains on that side for a number of weeks. An x-ray is taken:



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What is the diagnosis?

	Slipped upper femoral epiphysis
	Juvenile idiopathic arthritis

	Perthes disease
	Development dysplasia of the hip
	Transient synovitis

Dashboard

Overall score: **0%**

1 -

Question 54 of 94



An 11-year-old boy presents with a one-day history of pain in his left hip. He has 'niggling' pains on that side for a number of weeks. An x-ray is taken:



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What is the diagnosis?

Slipped upper femoral epiphysis

Juvenile idiopathic arthritis

	Perthes disease
	Development dysplasia of the hip
	Transient synovitis

Dashboard

Overall score: **0%**
1 -

□ Question 54 of 94

An 11-year-old boy presents with a one-day history of pain in the right hip, which has persisted for a number of weeks. An x-ray is taken:



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What is the diagnosis?

	Slipped upper femoral epiphysis
	Juvenile idiopathic arthritis

	Perthes disease
	Development dysplasia of the hip
	Transient synovitis

Dashboard

Overall score: **0%**
1 -

□ Question 54 of 94

□ □

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© Image used on license from Radiopaedia



What is the diagnosis?

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	Juvenile idiopathic arthritis

	Perthes disease
	Development dysplasia of the hip
	Transient synovitis

Dashboard

Overall score: **0%**
1 -



Question 54 of 94

□ □

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© Image used on license from Radiopaedia



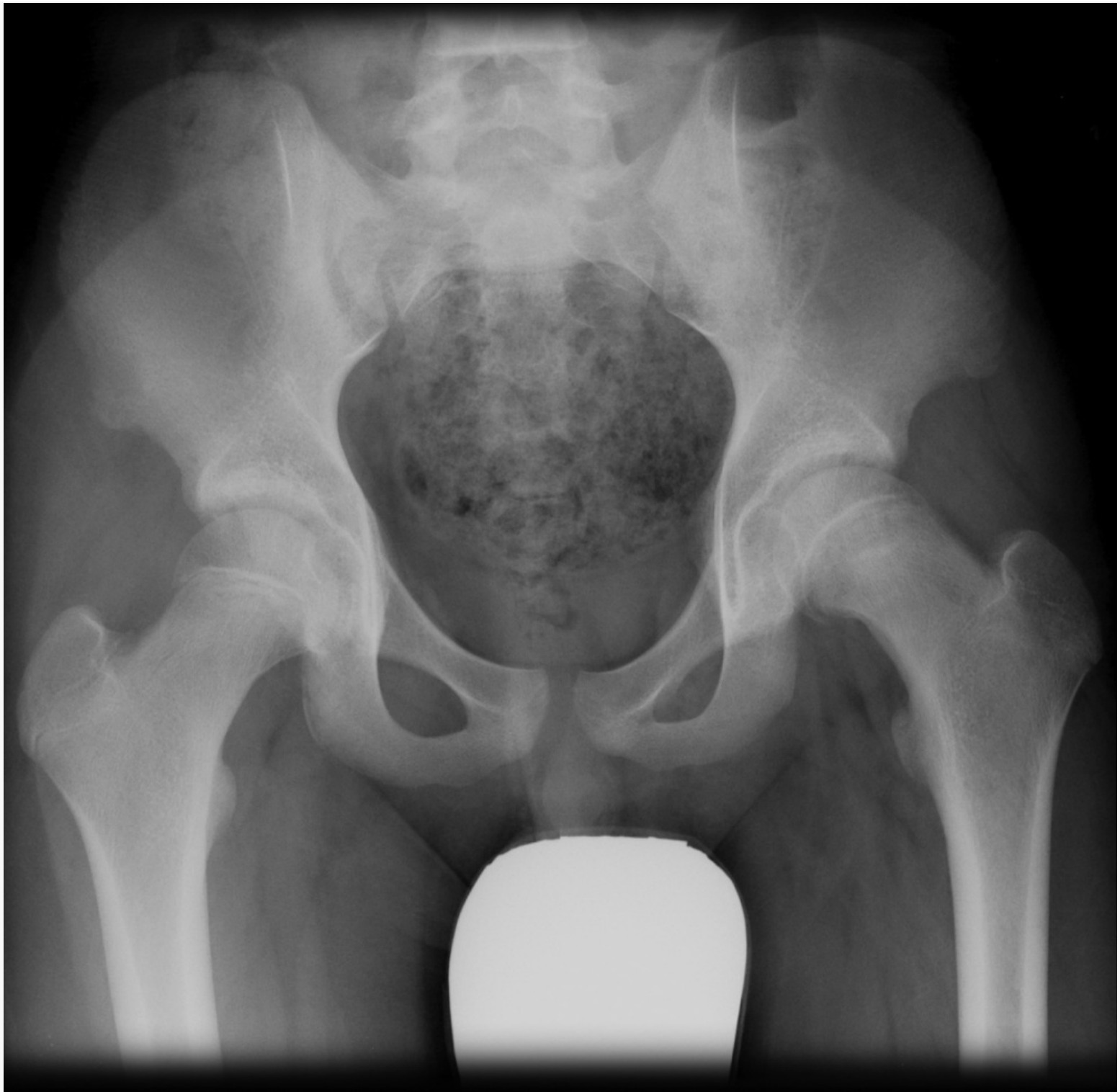
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	Juvenile idiopathic arthritis

	Perthes disease
	Development dysplasia of the hip
	Transient synovitis

Dashboard

Overall score: **0%**
1 -



□ Question 54 of 94

□ □

An 11-year-old boy presents with a one-day history of pain in his left hip. He has 'niggling' pains on that side for a number of weeks. An x-ray is taken:



© Image used on license from Radiopaedia



What is the diagnosis?

	Slipped upper femoral epiphysis
	Juvenile idiopathic arthritis

	Perthes disease
	Development dysplasia of the hip
	Transient synovitis

Dashboard

Overall score: **0%**
1 -



□ Question 55 of 94



A 65-year-old man was referred to rheumatology for advice regarding the management of his gout. The patient had suffered intermittent episodes of inflammation of the first metatarsophalangeal joint of both feet over the past ten years. The frequency of these episodes had been increasing, with 6 episodes in the past year. In addition, the patient's right knee had recently become inflamed with microscopy of synovial aspirate demonstrating needle shaped crystals with negative birefringence.

Colchicine and NSAIDs had been used effectively to provide symptomatic relief to the patient during an acute attack. Allopurinol had been previously trialled as prophylaxis at a dose of 200 mg daily, although was stopped after the patient's renal function was noted to have deteriorated after allopurinol was initiated. Lifestyle modifications have also been attempted.

Other medical problems included type 2 diabetes, hypertension, hypercholesterolaemia and chronic renal failure. Regular medications were ramipril, metformin and simvastatin.

On examination the patient was noted to be obese without evidence of current joint inflammation. Tophi were noted on examination of the patient's ears. Blood tests taken prior to clinic attendance are listed below.

Hb	16.5 g/dl
Platelets	$150 \times 10^9/l$
WBC	$8.6 \times 10^9/l$

Na ⁺	137 mmol/l
K ⁺	4.7 mmol/l
Urea	11.2 mmol/l
Creatinine	190 μ mol/l
eGFR	45 ml/min
Calcium (adjusted)	2.3 mmol/l
Urate	395 μ mol/l

What is the best strategy for gout prophylaxis in this patient?

	Prednisolone 10 mg daily
	Colchicine
	Febuxostat
	Naproxen
	Reduced dose allopurinol

Dashboard

Overall score: 0%

1 -

Question 55 of 94



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	Prednisolone 10 mg daily
	Colchicine
	Febuxostat
	Naproxen
	Reduced dose allopurinol

Dashboard

Overall score: 0%

1 -

□ Question 56 of 94

□ □

A 79-year-old woman falls over on to an outstretched hand and sustains a Colles' fracture (fracture of the distal radius). She has no past medical history of note other than depression and osteoarthritis. What is the most appropriate next course of action with regards to her risk of sustaining a further fracture?

	Arrange a DEXA scan
	Perform a FRAX (without bone mineral density) assessment
	Start alendronate 70mg once weekly
	No further action is required
	Arrange a myeloma screen

Dashboard

Overall score: 0%

1 -

□ Question 56 of 94

□ □

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	Start alendronate 70mg once weekly
	No further action is required
	Arrange a myeloma screen

Dashboard

Overall score: **0%**

1 -

Question 57 of 94

□ □

An 80-year-old man presents is taken to the Emergency Department after falling at home. His daughter notes that he fell onto his left side. An x-ray is taken of the pelvis:



What is the diagnosis?

	<p> <input type="checkbox"/> Paget's disease of the bone </p>
	<p> <input checked="" type="checkbox"/> Severe osteoarthritis </p>

	Left intertrochanteric fracture
	Left subcapital fracture
	Myeloma

Dashboard

Overall score: **0%**

1 -

□ Question 57 of 94

□ □

An 80-year-old man presents is taken to the Emergency Department after falling at home. His daughter notes that he fell onto his left side. An x-ray is taken of the pelvis:



What is the diagnosis?

Page't's disease of the bone

Severe osteoarthritis

	Left intertrochanteric fracture
	Left subcapital fracture
	Myeloma

Dashboard

Overall score: **0%**
1 -

□ Question 58 of 94



A 37 year old woman with known rheumatoid arthritis was reviewed at her annual follow-up at rheumatology clinic. The diagnosis of rheumatoid arthritis had been made ten years previously after the patient experienced severe inflammation of her meta-carpal phalangeal joints of both hands. Symptoms had been controlled with an initial reducing course of oral steroids and had been subsequently maintained on 15 mg of subcutaneous methotrexate weekly. She had experience one significant flare of her symptoms 18 months previously that had necessitated a single intra-muscular dose of corticosteroids.

On this occasion the patient reported no further swelling, pain or redness of the joints of her hands or other joints. She did report however that over the past 6 months she had experienced on-going severe pains throughout her body. In addition, she had been feeling tired and lethargic and had been finding it hard to concentrate on her work at as a computer programmer. She denied any history of skin rashes, photosensitivity, hair loss, swallowing difficulties or dry eyes and she had not lost any weight.

Examination did not demonstrate any evidence of active synovitis. A minor ulnar deviation of the digits of both hands was noted which the patient denied caused her any functional impairment. The patient was noted to be tender on palpation of the muscles of her arms, legs and paraspinal muscles. However, there was no associated muscle weakness with patient able to rise unaided from a chair without using the assistance of her arms. There was no thickening of the skin of the hands or face. Cardiovascular, respiratory and abdominal examination was unremarkable and there were no skin rashes.

Investigations requested following clinic review are listed below.

Haemoglobin	13.4 g / dL
White cell count	$6.6 \times 10^9/l$
Platelets	$198 \times 10^9/l$
Sodium	139 mmol / L
Potassium	4.3 mmol / L
Urea	4.8 mmol / L
Creatinine	75 micromol / L

Erythrocyte sedimentation rate	15 mm / h
Rheumatoid factor	Positive
Anti-nuclear antigen	Negative
Anti-citrullinated protein antibodies	37 units (reference < 20)

What is the likely cause of the patients new symptoms?

	Flare of rheumatoid arthritis
	Mixed connective tissue disease
	Chronic regional pain syndrome
	Inclusion body myositis
	Fibromyalgia

Dashboard

Overall score: 0%

1 -

□ Question 58 of 94



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	Fibromyalgia

Dashboard

Overall score: **0%**
1 -

□ Question 59 of 94



A 67-year-old female presented to the accident and emergency department with severe headache and shortness of breath for the last six hours followed by seizures which occurred twice during the last hour.

The patient is a known case of diffuse cutaneous systemic sclerosis diagnosed two years ago and she is on steroids and cyclophosphamide.

On examination, she looks ill, agitated and dyspnoeic. Her pulse rate is 100 beats per minute, regular and her blood pressure is 220/110 mmHg.

Her JVP is raised, there is a gallop rhythm and bilateral basal crackles. There is lower limb oedema and brisk reflexes.

Fundoscopy showed grade 3 hypertensive retinopathy.

Investigations done two weeks previously showed:

Serum sodium	140 mmol/L
Serum potassium	5.7 mmol/L
Serum urea	17 mmol/L
Serum creatinine	250 mol/L
Urinalysis	protein ++, blood ++

What is the most appropriate immediate treatment to lower her blood pressure?

	IV sodium nitroprusside
	IV labetalol
	Oral ACE inhibitor

	IV hydralazine
	Nitrate infusion

Dashboard

Overall score: **0%**
1 -

Question 59 of 94



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Question 59 of 94

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Dashboard

Overall score: **0%**
1 -

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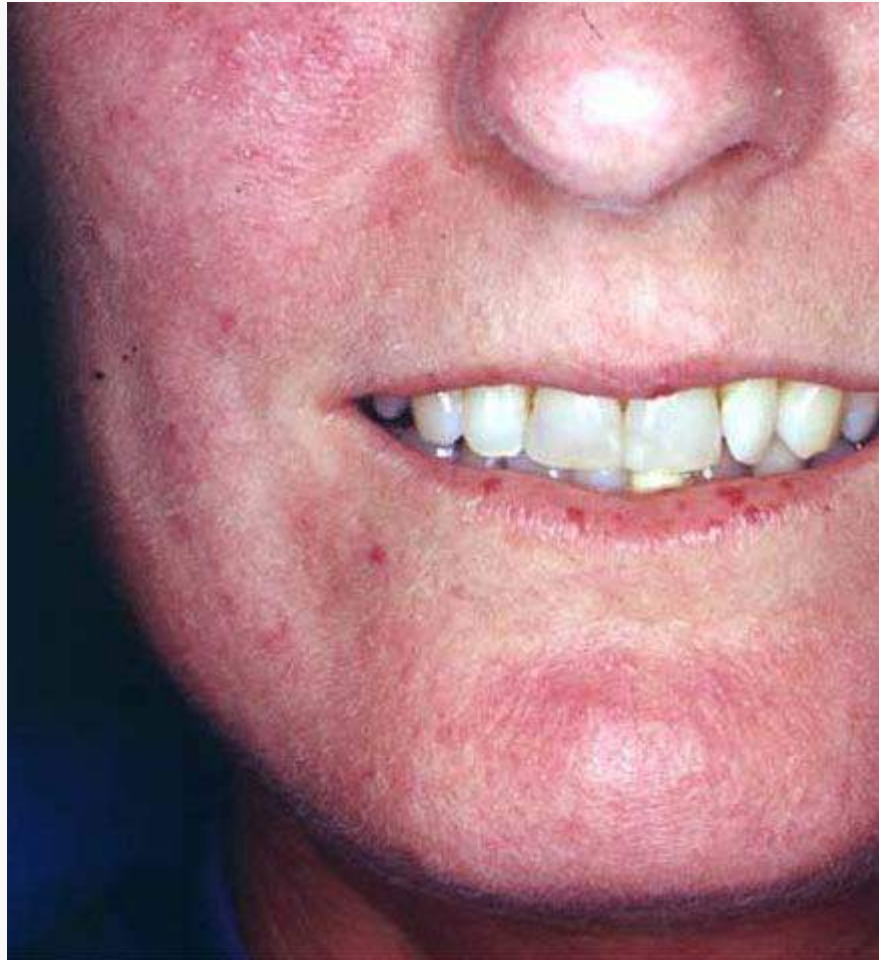
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	Oral ACE inhibitor



	IV hydralazine
	Nitrate infusion

Dashboard

Overall score: **0%**
1 -

Question 60 of 94

□ □

The radiograph below was taken from a patient who presented with pain, swelling and erythema of the right knee.



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What is the diagnosis?

<input type="checkbox"/>	Osteoarthritis
<input type="checkbox"/>	Rheumatoid arthritis
<input type="checkbox"/>	Pseudogout

	Gout
	Tibial plateau fracture

Dashboard

Overall score: 0%

1 -

Question 60 of 94

□ □

The radiograph below was taken from a patient who presented with pain, swelling and erythema of the right knee.



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What is the diagnosis?

	Osteoarthritis
	Rheumatoid arthritis
	Pseudogout

	Gout
	Tibial plateau fracture

Dashboard

Overall score: **0%**
1 -

□ Question 61 of 94

□ □

A 34-year-old man presents with back pain and leg weakness. This has been getting worse for the past two months and he now complains that he is 'bent over'. Over the past three months he describes feeling generally unwell, with a poor appetite and night sweats.

His past medical history includes hypothyroidism. He emigrated from Bangladesh around 6 months ago.

On examination he has a kyphosis. He is most tender over the lower part of the thoracic spine. Neurological examination of his lower limbs demonstrates reduced power in both legs.

A lumbar spinal film is shown below:



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	Osteoporosis secondary to hypogonadism
	Pott's disease
	Actinomycosis
	Sarcoma
	Hodgkin's lymphoma

Dashboard

Overall score: **0%**

1 -

□ Question 61 of 94

□ □

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Dashboard

Overall score: 0%

1 -



Question 61 of 94

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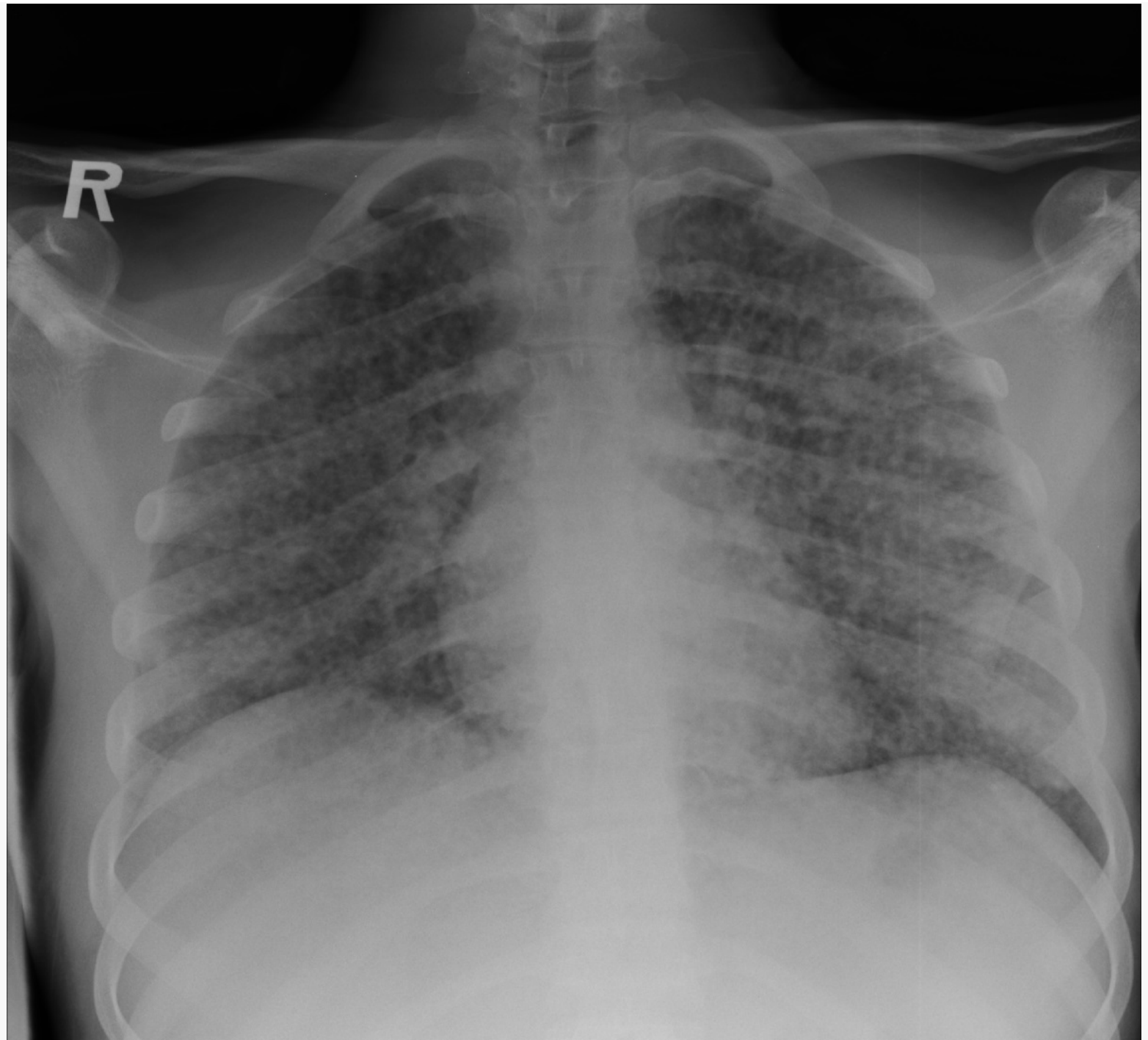
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	Osteoporosis secondary to hypogonadism
	Pott's disease
	Actinomycosis
	Sarcoma
	Hodgkin's lymphoma

Dashboard

Overall score: 0%

1 -



□ Question 61 of 94

A 34-year-old man presents with back pain and leg pain. He now complains that he is 'bent over'. Over the past few months, he has lost weight, decreased appetite and night sweats.

His past medical history includes hypothyroidism. He has no significant family history.

On examination he has a kyphosis. He is most tender over the lower thoracic spine. His lower limbs demonstrate reduced power in both legs.

A lumbar spinal film is shown below:





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	Osteoporosis secondary to hypogonadism
	Pott's disease
	Actinomycosis
	Sarcoma
	Hodgkin's lymphoma

Dashboard

Overall score: **0%**

1 -

Question 62 of 94

□ □

A 40-year-old woman is seen in an outpatient rheumatology clinic. She was diagnosed with Systemic lupus erythematosus 5 years previously when she has presented with fatigue, anaemia and a rash. She also has a past medical history of hypertension, gout and psoriasis.

She had noticed that the joints in her hands were becoming deformed, however, she was able to complete day to day task without any functional impairment and denied pain in the affected joints.

On examination, she had symmetrical marked reducible ulnar subluxation and deviation at the MCP joints. X-rays of her hands showed no erosions.

What is the most likely diagnosis?

	Jaccoud's arthropathy
	Rheumatoid arthritis
	Gout
	Psoriatic arthritis
	Sarcoid arthropathy

Dashboard

Overall score: 0%

1 -

Question 62 of 94

□ □

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	Jaccoud's arthropathy
	Rheumatoid arthritis
	Gout
	Psoriatic arthritis
	Sarcoid arthropathy

Dashboard

Overall score: **0%**

1 -

□ Question 63 of 94



A 76-year-old man is taken to the Emergency Department from his nursing home after falling in his room. Since the fall he has been complaining of pain in the left hip and has been walking with a limp. His past medical history includes benign prostatic hyperplasia, Alzheimer's disease and hypertension.

An x-ray of his hip is requested:



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What is the most likely diagnosis?

--	--

	Hyperparathyroidism
	Osteomalacia
	Severe osteoarthritis of the left hip
	Paget's disease of the bone
	Metastatic prostate cancer

Dashboard

Overall score: **0%**

1 -

□ Question 63 of 94



A 76-year-old man is taken to the Emergency Department from his nursing home after falling in his room. Since the fall he has been complaining of pain in the left hip and has been walking with a limp. His past medical history includes benign prostatic hyperplasia, Alzheimer's disease and hypertension.

An x-ray of his hip is requested:



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What is the most likely diagnosis?

	Hyperparathyroidism
	Osteomalacia
	Severe osteoarthritis of the left hip
	Paget's disease of the bone
	Metastatic prostate cancer

Dashboard

Overall score: **0%**

1 -

□ Question 63 of 94

□ □

A 76-year-old man is taken to the Emergency Department from his nursing home after falling in his room. Since the fall he has been complaining of pain in the left hip and has been walking with a limp. His past medical history includes benign prostatic hyperplasia, Alzheimer's disease and hypertension.

An x-ray of his hip is requested:



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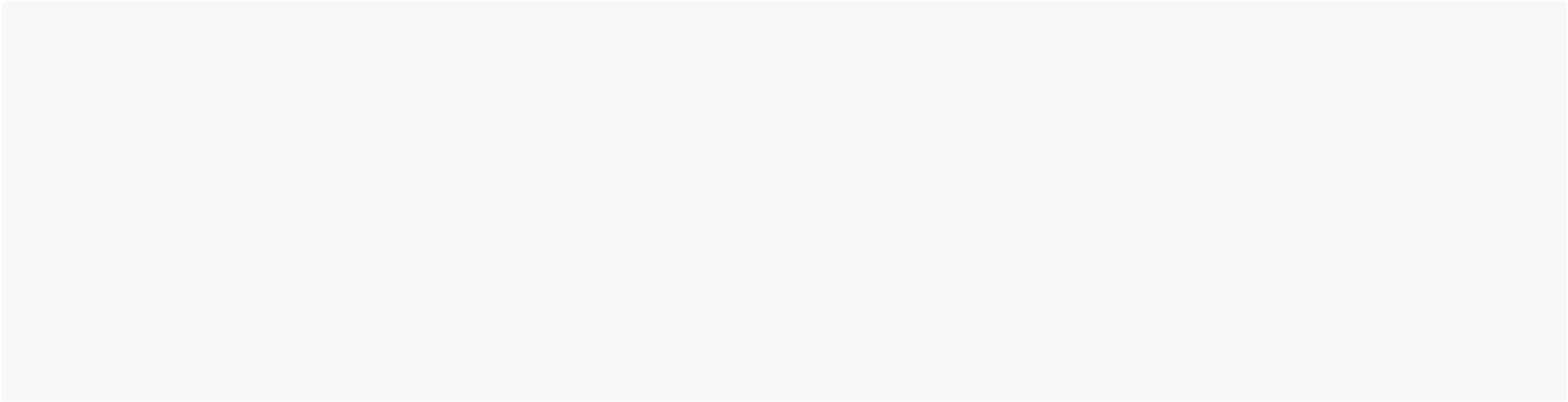


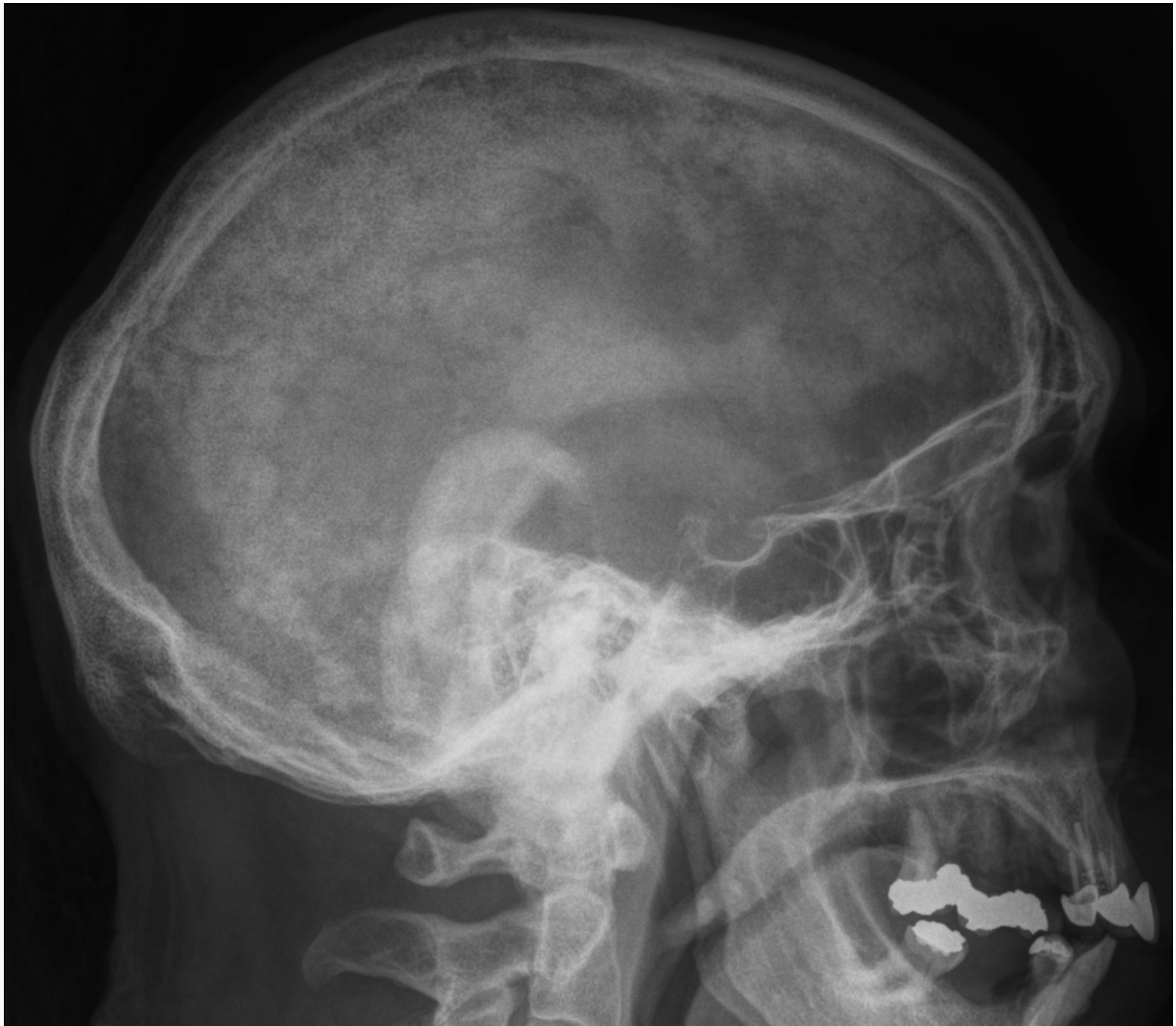
What is the most likely diagnosis?

	Hyperparathyroidism
	Osteomalacia
	Severe osteoarthritis of the left hip
	Paget's disease of the bone
	Metastatic prostate cancer

Dashboard

Overall score: **0%**
1 -





□ Question 63 of 94

□ □

A 76-year-old man is taken to the Emergency Department from his nursing home after falling in his room. Since the fall he has been complaining of pain in the left hip and has been walking with a limp. His past medical history includes benign prostatic hyperplasia, Alzheimer's disease and hypertension.

An x-ray of his hip is requested:



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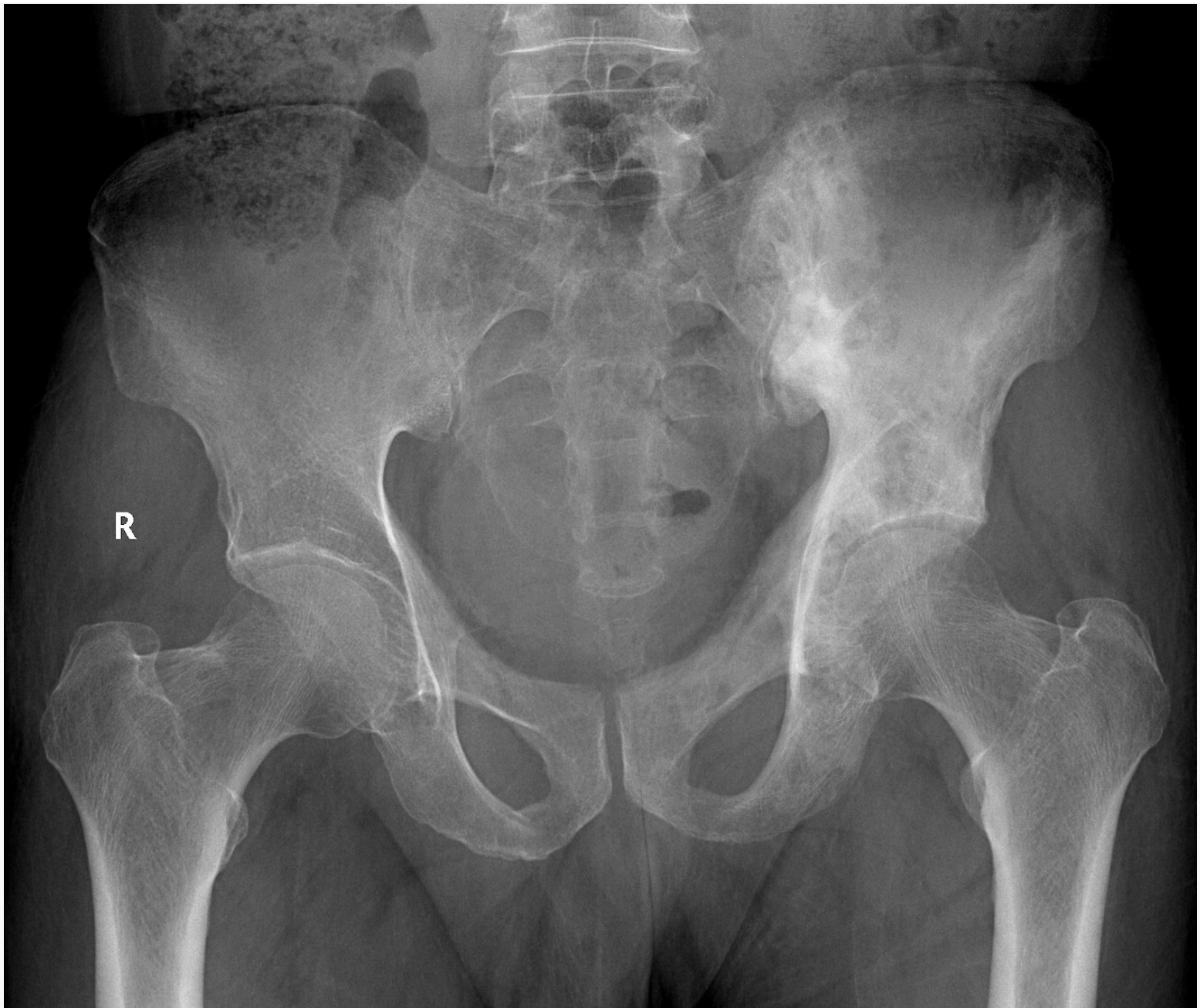


What is the most likely diagnosis?

	Hyperparathyroidism
	Osteomalacia
	Severe osteoarthritis of the left hip
	Paget's disease of the bone
	Metastatic prostate cancer

Dashboard

Overall score: **0%**
1 -



□ Question 64 of 94

□ □

A 55-year-old woman presents for review. Her mother has just been discharged after suffering a hip fracture. She is concerned that she may have 'inherited' osteoporosis and is asking what she should do. She has no significant past medical history of note, takes no regular medication and has never sustained any fractures. She smokes around 20 cigarettes per day and drinks about 3-4 units of alcohol per day.

What is the most appropriate course of action?

	Arrange bone mineral density measurement (DEXA scan)
	Reassure her that assessment of fragility fracture risk does not need to be done until 65 years
	Refer her to the genetics team for a risk assessment
	Start first-line bone protection (i.e. ensure calcium/vitamin D replete + oral bisphosphonate)
	Use the FRAX tool

Dashboard

Overall score: 0%

1 -

□ Question 64 of 94

□ □

A 55-year-old woman presents for review. Her mother has just been discharged after suffering a hip fracture. She is concerned that she may have 'inherited' osteoporosis and is asking what she should do. She has no significant past medical history of note, takes no regular medication and has never sustained any fractures. She smokes around 20 cigarettes per day and drinks about 3-4 units of alcohol per day.

What is the most appropriate course of action?

	Arrange bone mineral density measurement (DEXA scan)
	Reassure her that assessment of fragility fracture risk does not need to be done until 65 years
	Refer her to the genetics team for a risk assessment
	Start first-line bone protection (i.e. ensure calcium/vitamin D replete + oral bisphosphonate)
	Use the FRAX tool

Dashboard

Overall score: **0%**

1 -

Question 65 of 94

□ □

A 40-year-old banker, recently returned from a business trip to Hong Kong presented to the Emergency Department with a four-week history of fever, nasal crusting, haemoptysis and dyspnea. His CXR showed patchy air space shadowing in the right and left mid-zone with possible cavitation.

Blood tests showed:

Hb	100g/L
WCC	$7 \times 10^9/\text{L}$
Platelets	$625 \times 10^9/\text{L}$
CRP	56 mg/l
Urea	8.1mmol/L
Creatinine	138 $\mu\text{mol/L}$
ANA	Positive
cANCA	Negative

What is the most likely diagnosis?

	Pulmonary embolism
	Granulomatosis with polyangiitis
	Pulmonary TB
	Churg-Strauss syndrome
	Microscopic polyangiitis

Overall score: **0%**

1 -

Question 65 of 94

□ □

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	Churg-Strauss syndrome
	Microscopic polyangiitis

Dashboard

Overall score: **0%**

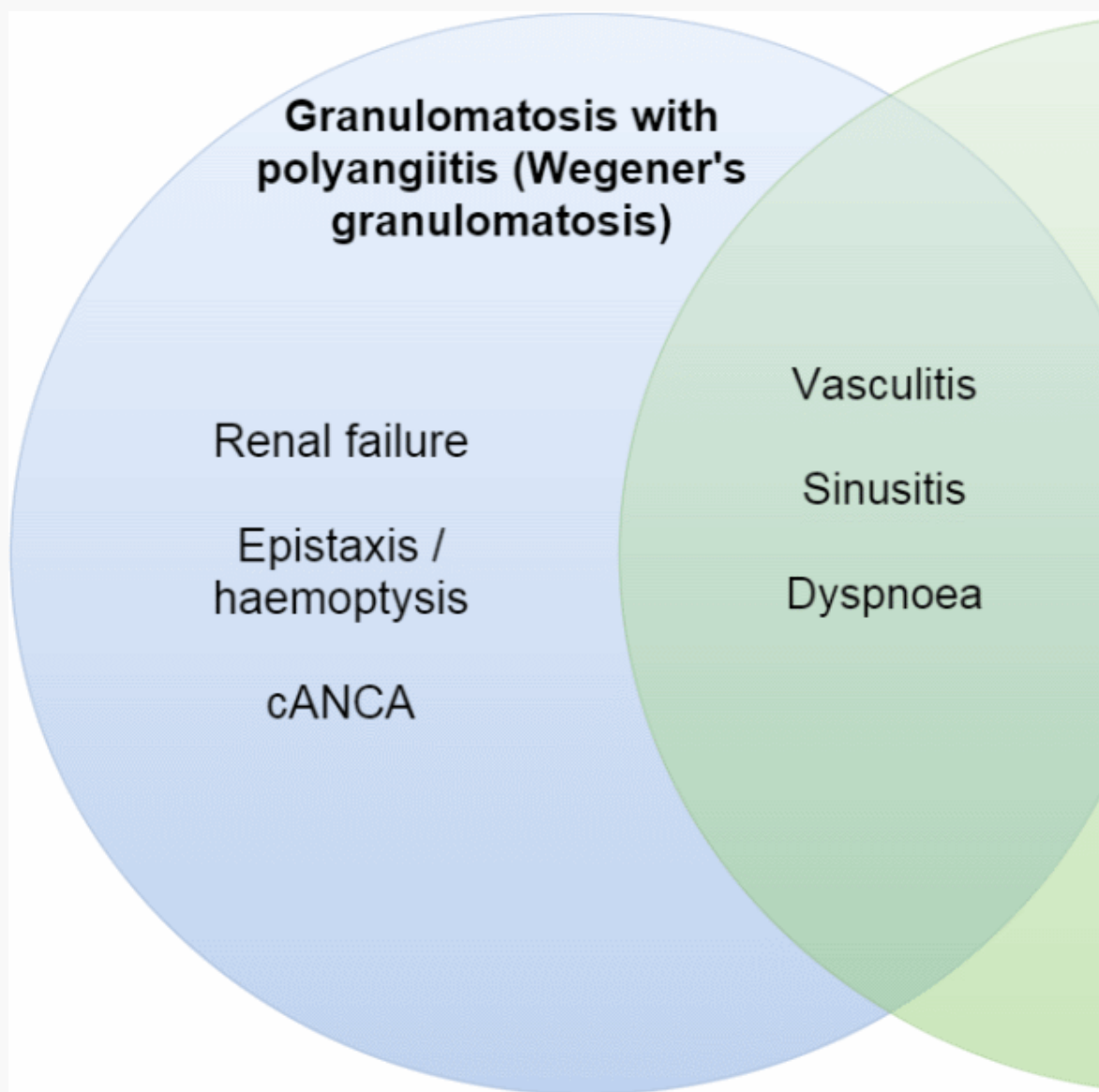
1 -

Question 65 of 94

A 40-year-old banker, recently returned from a four-week history of fever, weight loss, the right and left mid-zone v

Blood tests showed:

Hb	100g/L
WCC	$7 \times 10^9/L$
Platelets	$625 \times 10^9/L$
CRP	56 mg/l
Urea	8.1mmol/L
Creatinine	138 μ mol/L
ANA	Positive
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What is the most likely diagnosis?

	Pulmonary embolism
	Granulomatosis with polyangiitis
	Pulmonary TB
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	Microscopic polyangiitis

Dashboard

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1 -

Question 65 of 94

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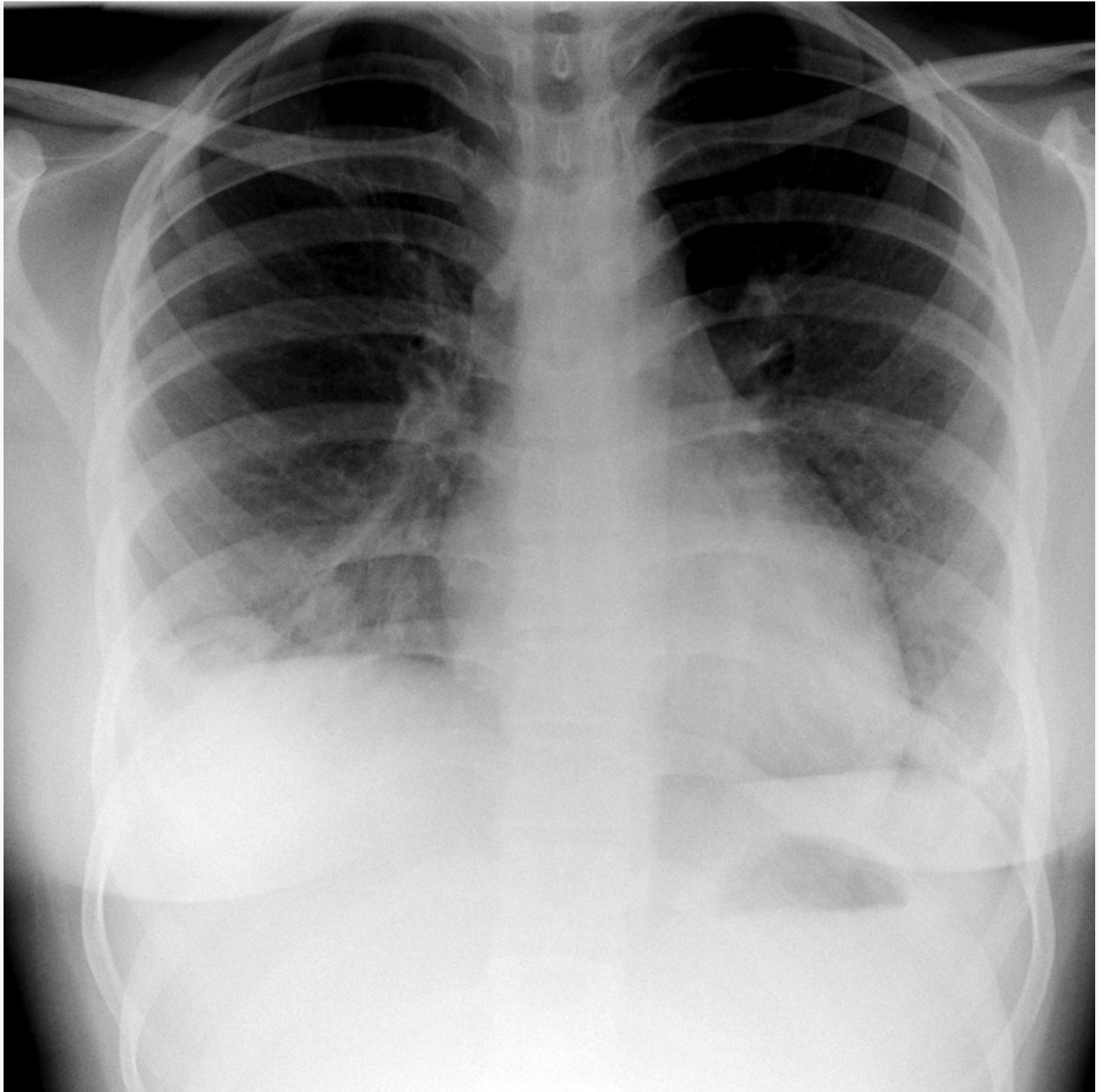
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	Pulmonary TB
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	Microscopic polyangiitis

Overall score: **0%**

1 -



Question 65 of 94

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	Pulmonary embolism
	Granulomatosis with polyangiitis
	Pulmonary TB
	Churg-Strauss syndrome
	Microscopic polyangiitis

Overall score: **0%**

1 -



Question 66 of 94

A 23 year old comes in with a painful right knee. He denies any specific trauma. He has no past medical history. On examination, he has a red and warm knee with a moderate effusion. His observations are respiratory rate of 24/min, blood pressure 120/72 mmHg, temperature 37.8°C. His knee is aspirated which is cloudy in appearance. Laboratory testing shows calcium pyrophosphate crystals and gram stain is awaited. What is the appropriate treatment plan?

<input type="checkbox"/>	Admit for intravenous antibiotics
<input type="checkbox"/>	Home with analgesia
<input type="checkbox"/>	Admit awaiting cultures
<input type="checkbox"/>	Check ferritin
<input type="checkbox"/>	Intra-articular depo-medrone

Dashboard

Overall score: **0%**

1 -

Question 66 of 94

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<input checked="" type="checkbox"/>	Admit for intravenous antibiotics
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<input type="checkbox"/>	Admit awaiting cultures
<input type="checkbox"/>	Check ferritin
<input type="checkbox"/>	Intra-articular depo-medrone

Dashboard

Overall score: **0%**

1 -

□ Question 67 of 94



A 52-year-old man presents with lethargy and reduced sensation in both feet. He reports a 2 month history of fevers and 4kg weight loss. He also reports intermittent testicular pain.

On examination there is livedo reticularis on both legs and reduced light touch and pain sensation on both feet.

Blood tests reveal:

Hb	116 g/l	Na ¹³⁷	# mmol/l	Bilirubin	18 µmol/l
Platelets	487 * 10 ⁹ /l	K ⁺	4.8 mmol/l	ALP	92 u/l
WBC	8.3 * 10 ⁹ /l	Urea	12.8 mmol/l	ALT	102 u/l
Neuts	6.3 * 10 ⁹ /l	Creatinine	182 µmol/l	γGT	16 u/l
MCV	89 fL	ESR	78mm/hr	Albumin	34 g/l

Which investigation is most likely to reveal the diagnosis?

	Hepatitis C serology
	Renal angiogram
	cANCA
	pANCA
	Hepatitis B serology

Dashboard

Overall score: 0%

Question 67 of 94

□ □

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	Hepatitis C serology
	Renal angiogram
	cANCA
	pANCA
	Hepatitis B serology

Dashboard

Overall score: **0%**

□ Question 68 of 94



A 26-year-old woman presents with a four month history of back pain. The pain is located around the lower lumbar vertebrae and spreads to both buttocks. Ibuprofen and walking seem to improve the pain. A lumbar spine film is requested:



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What is the most likely cause of this patients back pain?

	Marble bone disease
	Alkaptonuria

	Ankylosing spondylitis
	Facet-joint dysfunction
	Rheumatoid arthritis

Dashboard

Overall score: **0%**

1 -

Question 68 of 94



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Dashboard

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1 -

□ Question 68 of 94

□ □

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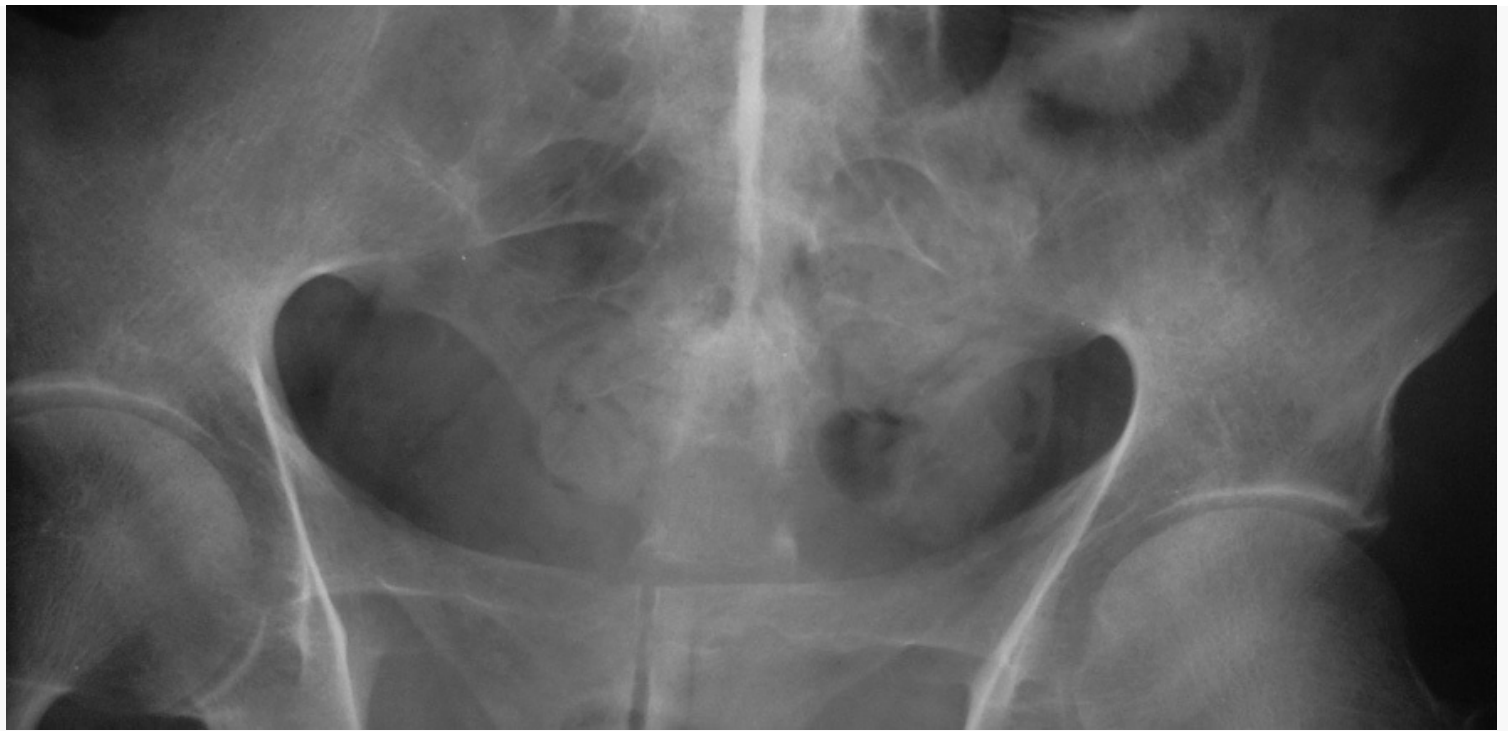
Marble bone disease

	Alkaptonuria
	Ankylosing spondylitis
	Facet-joint dysfunction
	Rheumatoid arthritis

Dashboard

Overall score: **0%**
1 -





□ Question 68 of 94

□ □

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Dashboard

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1 -



Question 68 of 94



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1 -



□ Question 68 of 94

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Dashboard

Overall score: **0%**
1 -

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Study Time: 15:22:33
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□ Question 68 of 94

□ □

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	Facet-joint dysfunction
	Rheumatoid arthritis

Dashboard

Overall score: **0%**
1 -





□ Question 69 of 94



A 27 year old male presents after recently returning from Bangladesh with 2 weeks of daily spiking fever, a new rash on his foot and pain on bending his knees or closing his hands. He also reports lumps and bumps on his neck that he thinks is new. He denies any cough or weight loss. He has no other past medical history and is unaware of any unwell family members. On examination, his temperature is 39.2 degrees. You note a maculopapular rash on his left sole and face. His knees and wrists are swollen and tender. His chest and cardiovascular examination are unremarkable, his abdomen is soft. However, you note a 12cm splenomegaly. His serum tests demonstrate:

Hb	12.7 g/dl
Platelets	450 * 10 ⁹ /l
WBC	17.0 * 10 ⁹ /l
Neuts	11.0 * 10 ⁹ /l

Na ⁺	138 mmol/l
K ⁺	3.5 mmol/l
Urea	7.8 mmol/l
Creatinine	70 µmol/l

CRP	30 mg/l
Ferritin	2000 µg/l
ALP	250 u/l
ALT	160 u/l
ANA	negative
dsDNA	negative

His chest radiograph appears unremarkable with no focal consolidation. A first induced sputum is negative for acid fast bacilli. What is the diagnosis?

	Miliary tuberculosis
	Adult onset Stills disease
	Reactive arthritis post-travellers diarrhoea
	Porphyria cutanea tarda
	Systemic lupus erythematosus

Dashboard

Overall score: 0%

1 -

□ Question 69 of 94



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	Reactive arthritis post-travellers diarrhoea
	Porphyria cutanea tarda
	Systemic lupus erythematosus

Dashboard

Overall score: 0%

1 -

Question 70 of 94

□ □

A 46-year-old man with a diagnosis of chronic hepatitis C is reviewed in hepatology clinic. He complains of 3 weeks of lethargy and generalised muscle pain.

On examination there are erythematous macules and purpuric papules on both lower limbs with some small areas of ulceration. Light touch and pain sensation is reduced in the toes bilaterally.

What is the most likely cause of these symptoms?

	Eosinophilic granulomatosis with polyangiitis
	Leukocytoclastic vasculitis
	Granulomatosis with polyangiitis
	Cryoglobulinaemia
	Microscopic polyangiitis

Dashboard

Overall score: 0%

1 -

Question 70 of 94

□ □

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Dashboard

Overall score: **0%**

1 -

Question 71 of 94

□ □

A 25-year-old woman with rheumatoid arthritis has returned to clinic complaining of a loss of taste sensation. Over the last few months, her early morning stiffness has been causing more problems and she also has been troubled by pain in both knees even after taking paracetamol and naproxen.

She was last reviewed one month ago and since then her joint stiffness and pain has improved slightly. On examination, there is a good range of movement in the knees. Her mucous membranes are moist and there are no ulcers in the mouth. Which of the following is most likely responsible?

	Anaemia of chronic disease
	Recent dose increase of hydroxychloroquine
	Associated Sjogren's syndrome
	Addition of penicillamine to her regimen
	Chronic use of tramadol to control her joint pain

Dashboard

Overall score: 0%

1 -

□ Question 71 of 94



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Dashboard

Overall score: **0%****1** -

□ Question 72 of 94



A 28 year old woman who is 20 weeks pregnant is referred to you by her GP. She has a 2 month history of arthralgia, myalgia, and fatigue. She had initially put this down to pregnancy but was finding it increasingly difficult to do her job as a health care assistant in a local nursing home. She denied any shortness of breath, swallowing difficulties or alopecia.

She had asthma since childhood but was relatively well controlled on inhaled salbutamol as required and beclomethasone 400 micrograms twice daily.

She was a smoker of 10 cigarettes per day and had not drunk any alcohol since learning she was pregnant. She lives with her husband and 2 year old son. Her mother has a history of rheumatoid arthritis.

Her observations show a blood pressure of 138/86 mmHg and a heart rate of 92 beats per minute. Urinalysis showed a trace of protein.

On examination there was tenderness of the 2nd and 3rd metacarpalphalangeal (MCP) joints bilaterally and both wrists but no evidence of active synovitis. There are several painless mouth ulcers. You notice a few bruises on her arms but no other evidence of a rash. Her chest was clear and heart sounds were normal. Neurological examination was normal including full visual fields and eye movements.

Her bloods showed the following:

Haemoglobin	108 g/L
White Cell Count	$9.2 \times 10^9/\text{L}$
Platelets	$103 \times 10^9/\text{L}$
Neutrophils	$6.02 \times 10^9/\text{L}$
Lymphocytes	$0.80 \times 10^9/\text{L}$
Eosinophils	$0.90 \times 10^9/\text{L}$
ESR	29 mm/h

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Urea	6.9 mmol/L
Creatinine	118 micromol/L
CRP	11 mg/L
Alkaline Phosphatase	87 iu/L
ALT	42 iu/L
Albumin	32 g/L

ANA	1: 320
dsDNA	24
Anti -Ro	Positive
Anti -La	Positive
Rheumatoid Factor	Positive
Anti CCP	Negative
Antiphospholipid antibody	negative

Given the most likely diagnosis, what complication needs to be discussed with her?

	Post partum haemorrhage
	Congenital heart block
	Deep vein thrombosis
	Pre-eclampsia
	Scleritis

Dashboard

Overall score: 0%

1 -

□ Question 72 of 94



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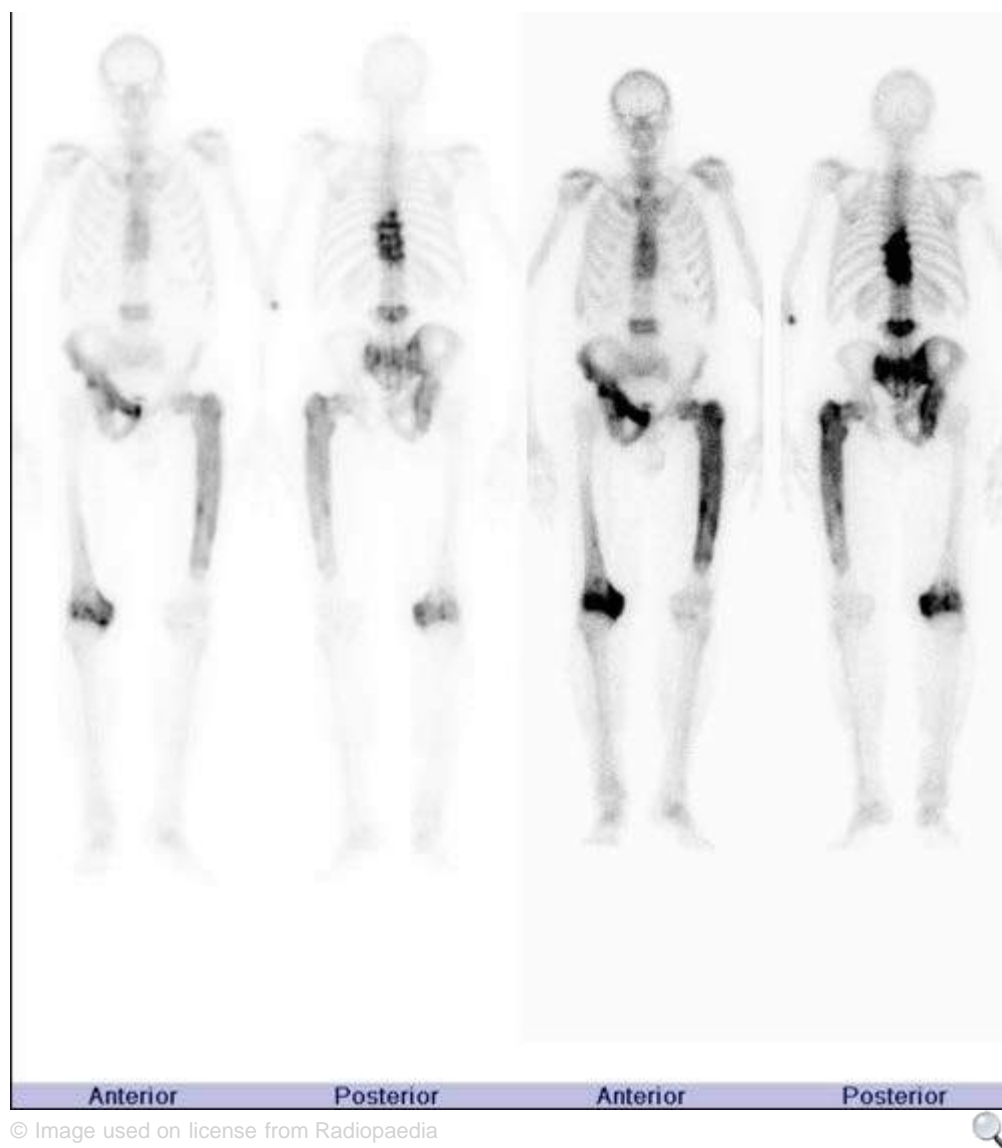
Dashboard
Overall score: 0% 1 -

□ Question 73 of 94

□ □

A 76-year-old is investigated for persistent and progressive pain in his back and left hip. This is no longer responding to standard analgesia and has resulted in him taking regular modified-release morphine sulphate. Standard plain films of his left hip did not show changes consistent with osteoarthritis.

An isotope bone scan is therefore ordered to investigate his pain further:



What is the most likely cause of his pain?

	Multiple myeloma
	Metastatic prostate cancer
	Paget's disease of the bone
	Osteoporosis
	Ankylosing spondylitis

Dashboard

Overall score: 0%

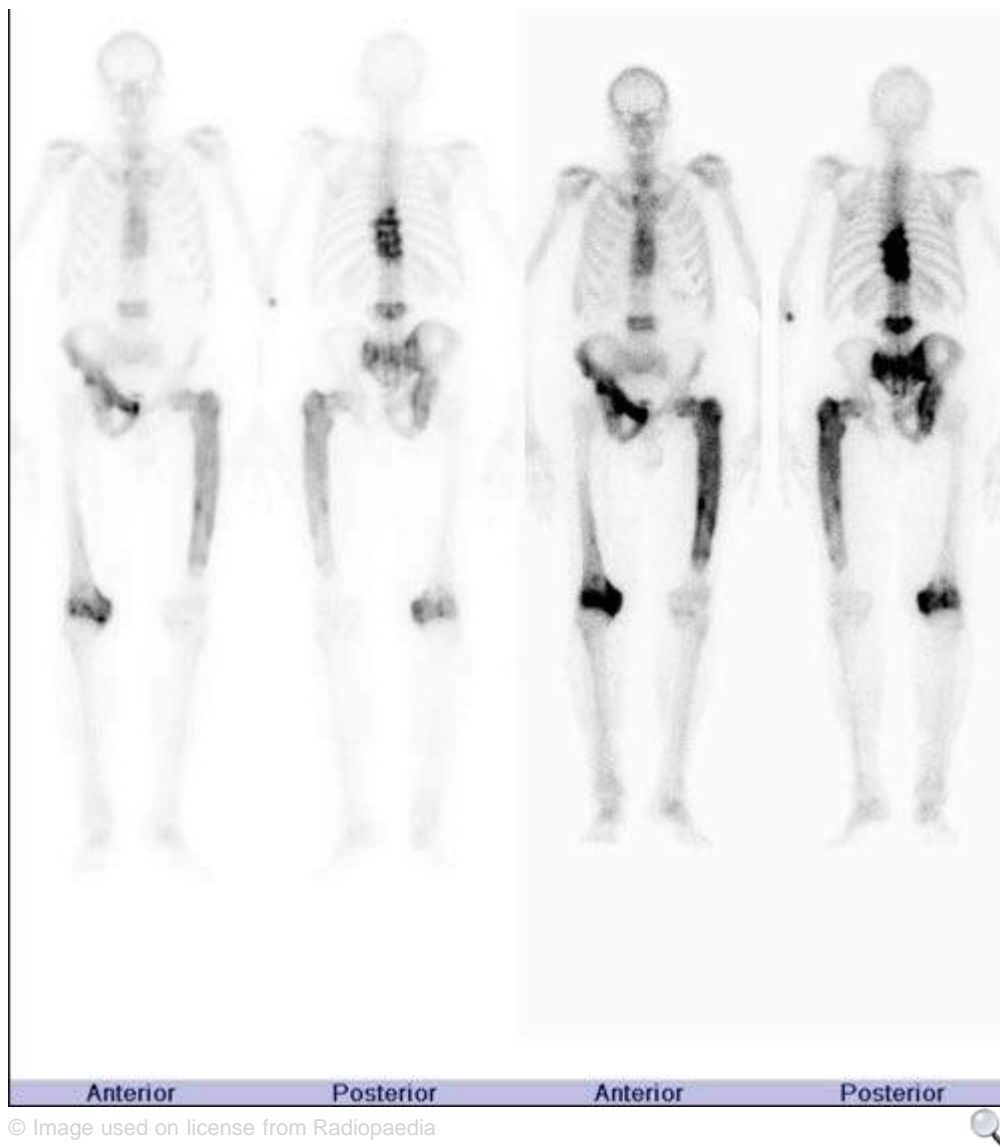
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□ Question 73 of 94

□ □

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Dashboard

Overall score: 0%

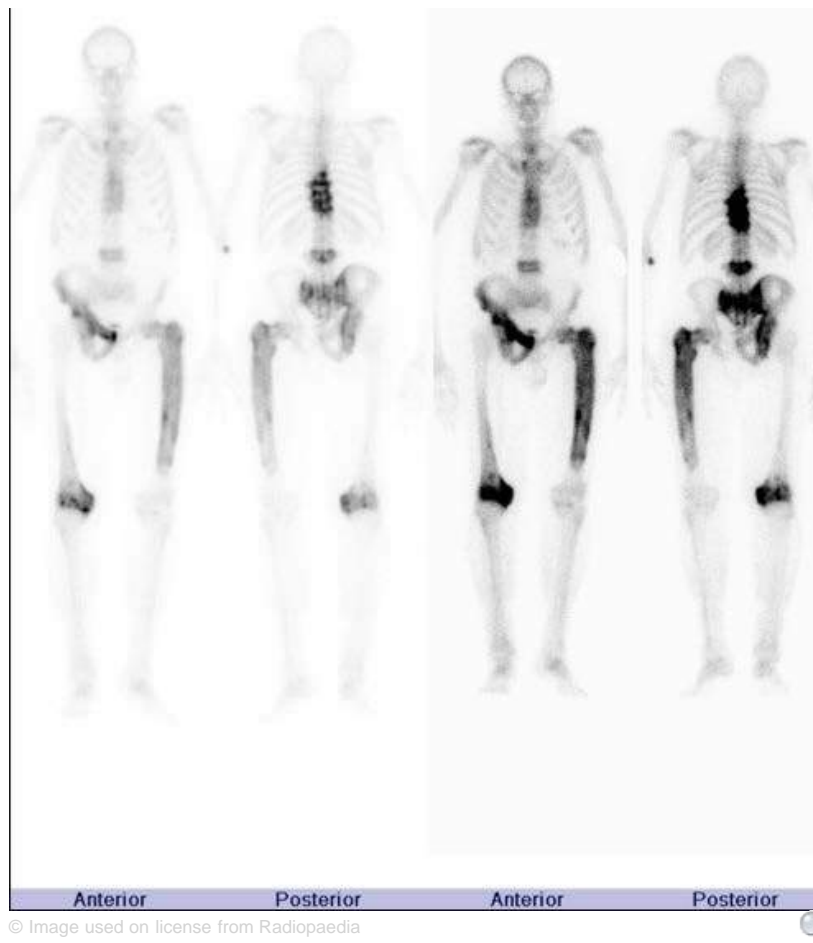
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□ Question 73 of 94

□ □

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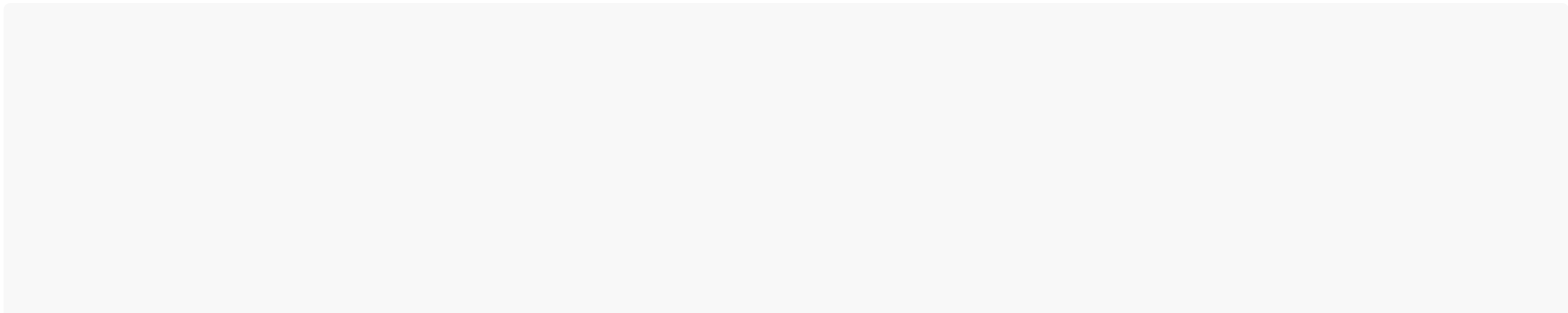
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Dashboard

Overall score: 0%

1 -



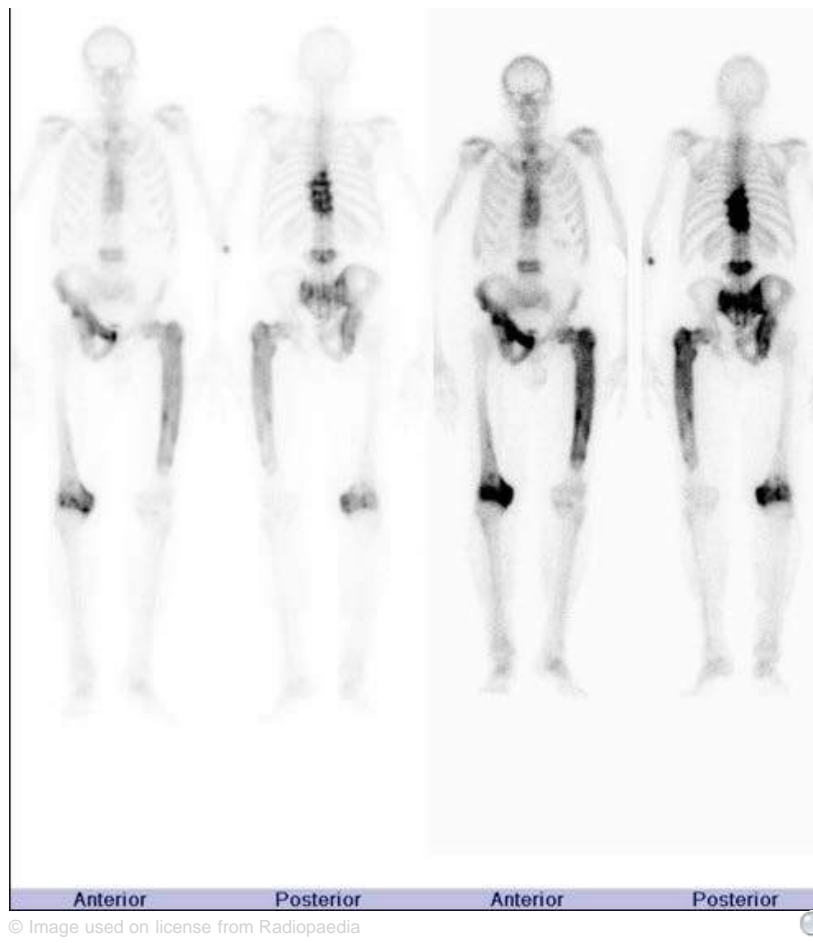


□ Question 73 of 94

□ □

A 76-year-old is investigated for persistent and progressive pain in his back and left hip. This is no longer responding to standard analgesia and has resulted in him taking regular modified-release morphine sulphate. Standard plain films of his left hip did not show changes consistent with osteoarthritis.

An isotope bone scan is therefore ordered to investigate his pain further:



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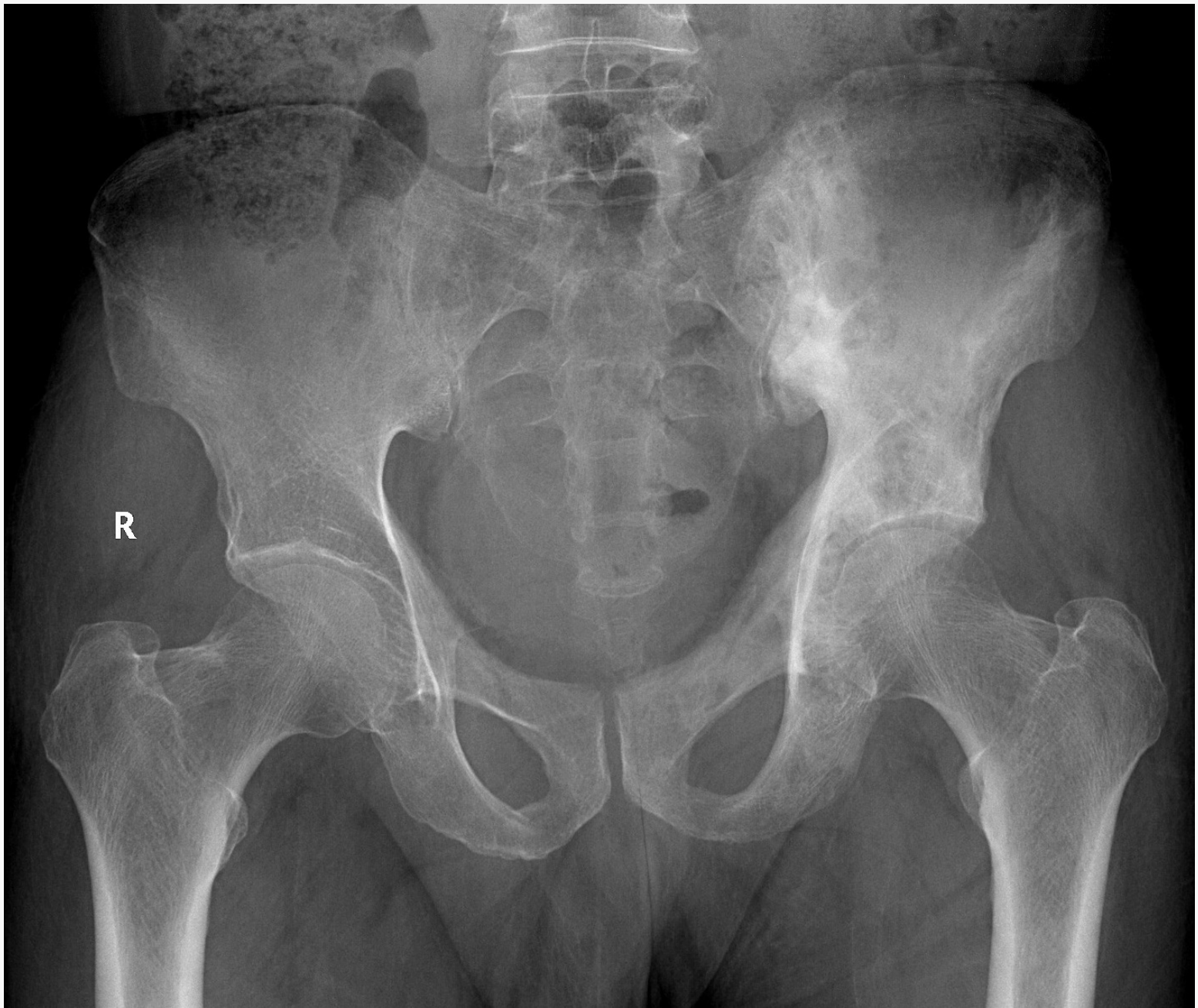
What is the most likely cause of his pain?

	Multiple myeloma
	Metastatic prostate cancer
	Paget's disease of the bone
	Osteoporosis
	Ankylosing spondylitis

Dashboard

Overall score: 0%

1 -



□ Question 74 of 94



A 49 year old woman presents with a one year history of joint pain and an intermittent purpuric rash. For the last 3 month she feels more fatigued than usual with malaise, fever and intermittent abdominal pain. She had an appendectomy 10 years ago. Beside that there is no past medical history of significance.

On clinical examination the only abnormality is a purpuric rash involving her calves and thighs.

The results of initial investigations showed a normal full blood count, but impaired renal function with a plasma creatinine of 160 $\mu\text{mol/l}$.

Another set of investigations were ordered to reach a diagnosis:

Na ⁺	135 mmol/l
K ⁺	4 mmol/l
Creatinine	165 mmol/l
Urea	11 mmol/l
CRP	50 mg/l
ESR	70 mm/hr
Urine analysis	Protein +, RBCs ++
Rheumatoid factor	negative
C3 and C4 levels	normal
cANCA	positive
pANCA	positive
ANA	negative

Renal biopsy showed focal necrosis, crescent formation, and absence of immunoglobulin deposits on immunofluorescence.

What is the most likely diagnosis?

	Rheumatoid vasculitis
	Mixed cryoglobulinaemia
	Wegner's granulomatosis (WG)
	Microscopic polyangitis (MPA)
	Systemic lupus erythematosus (SLE)

Dashboard

Overall score: 0%

1 -

□ Question 74 of 94



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	Systemic lupus erythematosus (SLE)

Dashboard

Overall score: **0%**
1 -

□ Question 75 of 94



A 70 year old man with rheumatoid arthritis presents for his monthly monitoring bloods because he is on methotrexate. He takes methotrexate 20mg once a week with folic Acid 5mg once weekly on a different day. He currently feels well in himself and his arthritis is well controlled. He does not drink alcohol or smoke. His monitoring blood tests come back as follows:

Hb	140 g/l	Na ⁺	139 mmol/l	Bilirubin	14 µmol/l
Platelets	240 * 10 ⁹ /l	K ⁺	4.2 mmol/l	ALP	100 u/l
WBC	7 * 10 ⁹ /l	Urea	5 mmol/l	ALT	80 u/l
Neuts	4.5 * 10 ⁹ /l	Creatinine	87 µmol/l		

What is the correct course of action?

	Stop methotrexate
	Reduce methotrexate dose to 10mg once weekly
	Switch methotrexate to sulfasalazine
	Continue on current dose with repeat bloods in one month
	Stop methotrexate and urgent liver USS

Dashboard

Overall score: 0%

1 -

□ Question 75 of 94



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Dashboard

Overall score: **0%**

1 -

Question 76 of 94

□ □

A 40 year old man presents with arthralgia in his ankles. He reports he has had it for years, but it has worsened in the last few months. He denies any previous trauma to his ankles. On examination he has tenderness and reduced range of movement in his ankles. He takes Ibuprofen 400mg TDS, and Paracetamol 1g QDS. X-rays of his ankles show joint space narrowing and some subchondral sclerosis. Previous blood tests show he is negative for rheumatoid factor and anti-CCP antibody. What is the best next investigation?

	CT ankle
	Repeat x-ray in 3 months
	Calcium and phosphate levels
	Ferritin and total iron binding protein
	PET scan

Dashboard

Overall score: 0%

1 -

□ Question 76 of 94

□ □

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Dashboard

Overall score: **0%****1** -

□ Question 77 of 94



A 72-year-old man attends rheumatology clinic for review of his osteoporosis treatment after being referred by the orthopaedic team. The patient had been diagnosed with osteoporosis six years previously after a DEXA scan had been arranged by his General Practitioner. Treatment with alendronic acid (70 mg weekly) had been initiated immediately after the diagnosis. After five years of bisphosphonate treatment, a repeat DEXA scan had been arranged and following review in rheumatology clinic, a treatment break had been agreed with the patient. Unfortunately, one year after stopping alendronic acid, the patient had tripped and fractured his right neck of femur, subsequently undergoing hemiarthroplasty.

Other past-medical history was significant for an episode of giant cell arteritis 10 years previously that had necessitated a prolonged course of corticosteroids. However, patient was now successfully weaned from corticosteroid treatment and remained in remission. The patient had never been diagnosed with rheumatoid arthritis and did not smoke cigarettes or drink alcohol. There was no family history of fragility fractures that the patient could recall.

On questioning, the patient reported that he had never had any adverse effects from alendronic acid treatment and would be happy to take this medication again if recommended.

Height	185 cm
Weight	90 kg
Femoral neck BMD (6 years previously)	T - 2.7
Femoral neck BMD (1 year previously)	T - 2.3

What is the most appropriate next step in the management of the patient's osteoporosis?

	Repeat DEXA scan not required, start treatment with zoledronic acid
	Repeat DEXA scan not required, restart treatment with alendronic acid
	Repeat DEXA scan in one year
	Repeat DEXA scan not required, start treatment with denosumab
	Repeat DEXA scan immediately

Dashboard

Overall score: **0%**

1 -

□ Question 77 of 94



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1 -

□ Question 77 of 94

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	Repeat DEXA scan not required, start treatment with denosumab
	Repeat DEXA scan immediately

Overall score: **0%**

1 -



□ Question 78 of 94

□ □

An 85-year-old woman presents with a long history of poorly controlled type 2 diabetes mellitus presents to her GP complaining of a swollen right foot. She describes it as a 'gammy' foot and says she is always tripping over it. The pain is described as being 2 out of 10. The patient also describes reduced sensation up to her ankles.

On examination she has reduced sensation in both feet. The right midfoot is swollen, warm and slightly erythematous but there is no ulcer present. The dorsalis pedis pulse is difficult to feel on the right hand side.

An x-ray is requested:



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What is the most likely diagnosis?

	Septic arthritis of the 1st metatarsophalangeal joint
	Osteomyelitis
	Charcot joint

	Critical ischaemia of the right foot secondary to peripheral arterial disease
	Gout

Dashboard

Overall score: 0%

1 -

□ Question 78 of 94

□ □

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1 -

Question 78 of 94

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	Osteomyelitis
	Charcot joint
	Critical ischaemia of the right foot secondary to peripheral arterial disease
	Gout

Dashboard

Overall score: **0%**

1 -



□ Question 79 of 94



A 54 year old lady with known Sjogren's syndrome presents to her GP with lethargy. There are no abnormal findings on physical examination. The patient takes no regular medication apart from artificial tears. She drinks 10 units of alcohol a week and doesn't smoke. Her GP refers her to your clinic as her routine bloods come back showing the following:

Hb	140 g/l	Na ⁺	134 mmol/l	Bilirubin	6 µmol/l
Platelets	225 * 10 ⁹ /l	K ⁺	3.7 mmol/l	ALP	650 u/l
WBC	6.7 * 10 ⁹ /l	Urea	4.2 mmol/l	ALT	36 u/l
Neuts	4 * 10 ⁹ /l	Creatinine	90 µmol/l		

What is the most likely diagnosis?

	Gall stones
	Primary sclerosing cholangitis
	Sarcoma
	Paget's disease
	Primary biliary cirrhosis

Dashboard

Overall score: 0%

1 -

□ Question 79 of 94



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	Gall stones
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Dashboard

Overall score: **0%**

1 -

□ Question 80 of 94



A 46-year-old gentleman was referred by his GP to the respiratory clinic with deteriorating asthma control. He was diagnosed by his GP 2 years ago following complaints of feeling short of breath on exertion with wheeziness. Unfortunately, his symptoms deteriorated despite a trial of Clenil modulate 1000mcg BD, salmeterol 200mcg BD and montelukast 10mg OD. Upon further questioning, he stated that he had pins and needles in both hands as well as numbness of his fingertips for the last few weeks. His past medical history included hypertension, gout and sinusitis for which he was prescribed ramipril 5mg OD, allopurinol 100mg OD, salbutamol PRN and mometasone nasal spray 50mcg BD. He smoked 20 cigarettes per day and consumed 12 units of alcohol per week.

On examination, he appeared unwell. His heart rate was 98 bpm, respiratory rate 18/min, oxygen saturations 94% on air and blood pressure 146/82 mmHg. His heart sounds were normal with a normal JVP and examination of the chest revealed bilateral expiratory wheezes globally. Examination of the abdomen was normal. Examination of the peripheral nervous system demonstrated a peripheral neuropathy with a glove and stocking sensory loss of the upper limbs. Examination of the skin revealed the presence of purpura on his lower legs.

Initial investigations revealed the following results:

Hb	102 g/l
Platelets	342 * 10 ⁹ /l
WBC	12.1 * 10 ⁹ /l
	Neutrophils 82% count Lymphocytes 7% count Eosinophils 10% count Monocytes 1% count
ESR	42 mm/hr

Na ⁺	141 mmol/l
K ⁺	3.9 mmol/l
Urea	6.2 mmol/l
Creatinine	78 µmol/l

Chest x-ray: bilateral scattered pulmonary shadowing in lower zones
ECG: heart rate 97bpm, normal sinus rhythm, QRS interval 112ms, QTc interval 424ms

Which of the following tests is most likely to lead to the underlying diagnosis?

	Anti glomerular basement membrane antibodies
	p-ANCA antibodies
	ANA antibodies
	Anti Jo-1 antibodies
	c-ANCA antibodies

Dashboard

Overall score: 0%

1 -

□ Question 80 of 94



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Dashboard

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1 -

Question 80 of 94

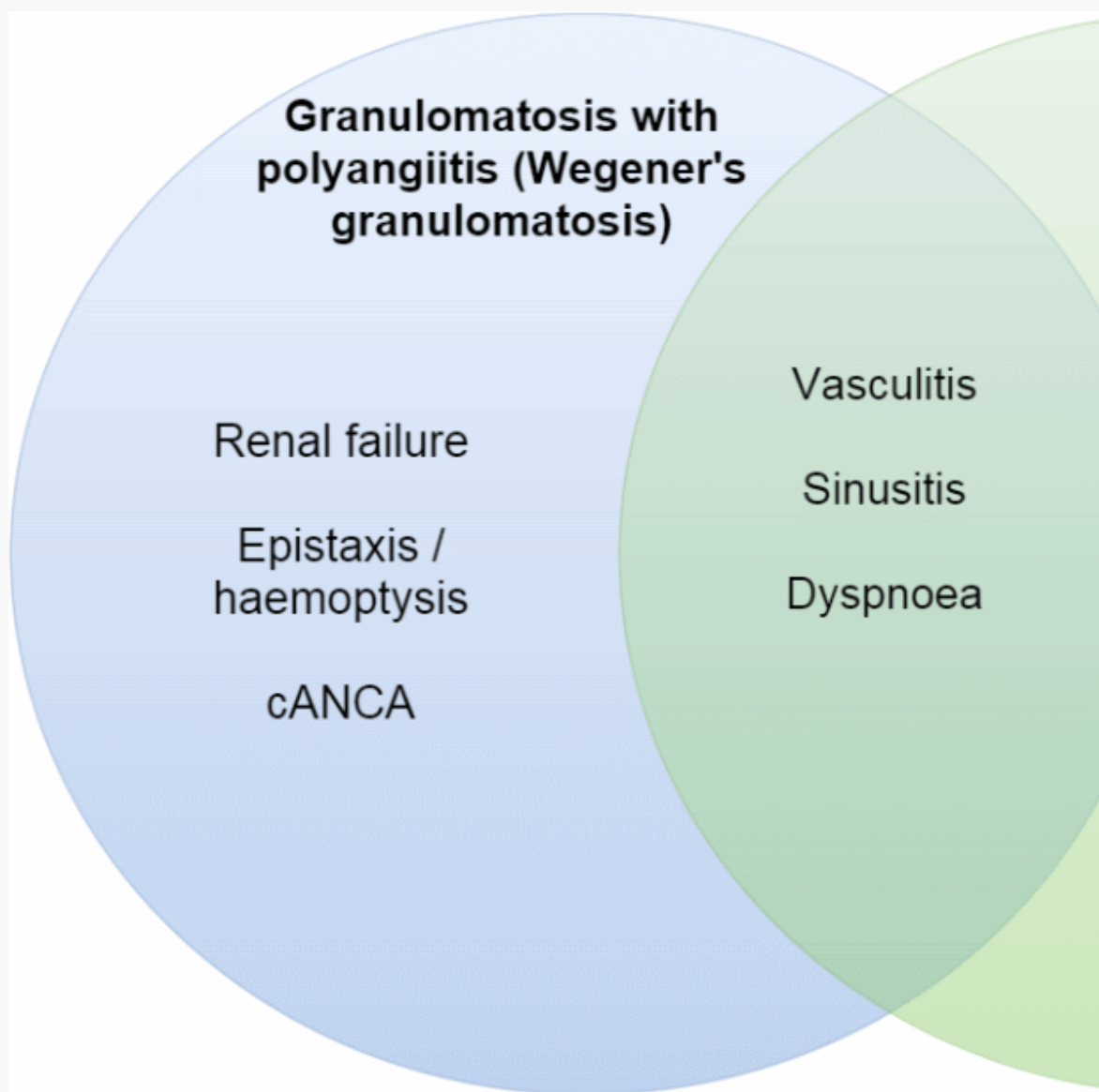
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Dashboard

Overall score: **0%**
1 -

□ Question 81 of 94



A 40-year-old man presents to the Emergency Department with pain in his left foot. He thinks this may have been triggered by dropping a heavy box on it at work a few days ago. He is known to have type 2 diabetes mellitus which is managed with metformin. On examination there is erythema, tenderness and swelling in the distal, medial aspect of the left foot.

Bloods show the following:

Hb	145 g/l
Platelets	$311 \times 10^9/l$
WBC	$6.3 \times 10^9/l$
CRP	56 mg/l

An x-ray is requested:



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What is the most appropriate management?

	Naproxen
	Allopurinol
	Below-the-knee plaster cast
	Intravenous antibiotics
	Supportive stocking e.g. TubiGrip

Dashboard

Overall score: 0%

1 -

□ Question 81 of 94

□ □

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□ Question 81 of 94

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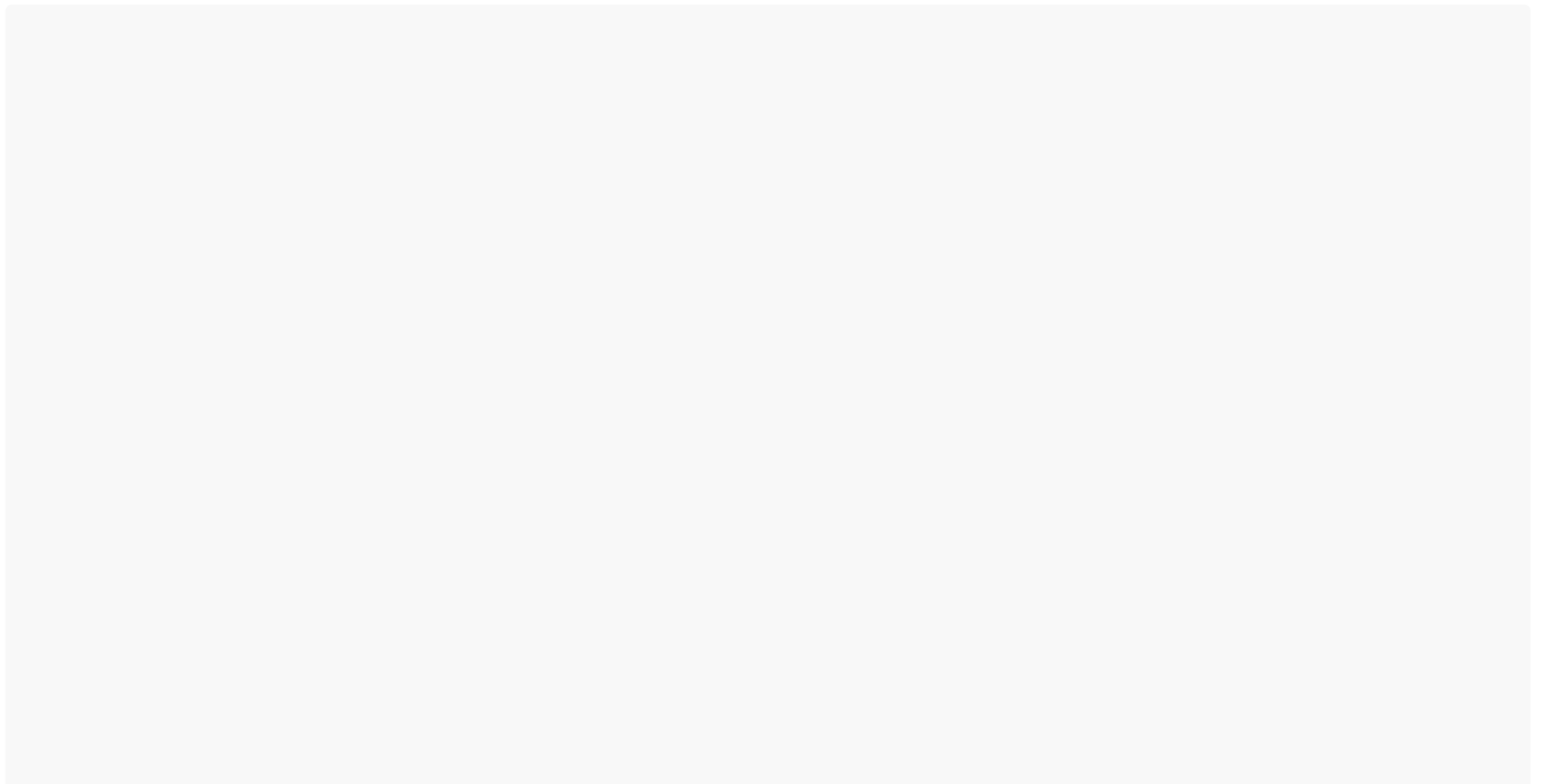
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Dashboard

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1 -





Question 81 of 94

□ □

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Dashboard

Overall score: 0%

1 -



□ Question 82 of 94



A 52-year-old female has presented to your neurology clinic reporting difficulty in lifting her arms during exercises at the gym over the past two months. She is distressed by her symptoms and is tearful, mentioning that she is also using significant amounts of make-up to cover a new purple rash and swelling around her eyelids. She reports no past medical history no recent trauma and is normally fit and well. She has had a dry cough for the past 5 months that she puts down to her previous social smoking when she would smoke up to 2 cigarettes whilst going out with friends every 2 weeks.

On examination, you note a limited range of passive movement in both shoulders and hips secondary to tender deltoids and hip flexors. Examination of power demonstrates 4- out of 5 symmetrically in hip flexion and shoulder abduction. An elliptical erythematous rash is present around her eyes, the skin around her fingers appear tough bilaterally. Auscultation of her chest reveals bibasal fine inspiratory crackles and normal heart sounds. Observations show she is currently has a low-grade temperature of 37.7 degrees. A chest radiograph demonstrates bilateral fibrotic changes.

Her admission blood tests are as follows:

Hb	121 g/l
Platelets	$590 \times 10^9/l$
WBC	$12.3 \times 10^9/l$
ESR	20 mm/hr
Creatine kinase	3000 u/l
LDH	250 u/l

What is the most likely unifying diagnosis?

	Inclusion body myositis
	Systemic sclerosis
	Dermatomyositis

	Polymyalgia rheumatica
	Fibromyalgia

Dashboard

Overall score: **0%**
1 -

□ Question 82 of 94



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Dashboard

Overall score: **0%**
1 -

□ Question 83 of 94



A 45 year old patient comes in with a polyarthralgia. She is getting cyclical fevers along with the pain and also mentions she gets a salmon pink rash on her torso. She says she has had flares of this in the past and previously has been admitted to ITU for intravenous medications but she cannot recall their names. Her flares started in her late twenties. She has not had a flare for many years now. Her regular medications consist of paracetamol 1g PRN and naproxen 500mg PRN. On examination she is tender in most of her joints including her hips, knees, wrists, shoulders and the small joints of her hands. Her observations show heart rate of 110/min, respiratory rate of 24/min, blood pressure of 96/65mmHg, oxygen saturations of 98% on room air and temperature 39°C. Her blood tests reveal:

Hb	135 g/l	Na ⁺	136 mmol/l
Platelets	269 * 10 ⁹ /l	K ⁺	4.6 mmol/l
WBC	8 * 10 ⁹ /l	Urea	5 mmol/l
Neuts	6 * 10 ⁹ /l	Creatinine	90 µmol/l
Lymphs	2 * 10 ⁹ /l	CRP	55 mg/l
Eosin	0.1 * 10 ⁹ /l	Ferritin	1559 ng/ml

What is her diagnosis?

	Adult-onset Still's disease
	Rheumatoid arthritis
	Septic arthritis
	Psoriatic arthritis
	Tuberculosis

Overall score: **0%**

1 -

□ Question 83 of 94



A 45 year old patient comes in with a polyarthralgia. She is getting cyclical fevers along with the pain and also mentions she gets a salmon pink rash on her torso. She says she has had flares of this in the past and previously has been admitted to ITU for intravenous medications but she cannot recall their names. Her flares started in her late twenties. She has not had a flare for many years now. Her regular medications consist of paracetamol 1g PRN and naproxen 500mg PRN. On examination she is tender in most of her joints including her hips, knees, wrists, shoulders and the small joints of her hands. Her observations show heart rate of 110/min, respiratory rate of 24/min, blood pressure of 96/65mmHg, oxygen saturations of 98% on room air and temperature 39°C. Her blood tests reveal:

Hb	135 g/l	Na ⁺	136 mmol/l
Platelets	269 * 10 ⁹ /l	K ⁺	4.6 mmol/l
WBC	8 * 10 ⁹ /l	Urea	5 mmol/l
Neuts	6 * 10 ⁹ /l	Creatinine	90 µmol/l
Lymphs	2 * 10 ⁹ /l	CRP	55 mg/l
Eosin	0.1 * 10 ⁹ /l	Ferritin	1559 ng/ml

What is her diagnosis?

	Adult-onset Still's disease
	Rheumatoid arthritis
	Septic arthritis
	Psoriatic arthritis
	Tuberculosis

Dashboard

Overall score: **0%**

1 -

□ Question 84 of 94



An 80-year-old retired GP with no past medical history presents to hospital with a 6 month history of muscle aches and weakness. She also has difficulty swallowing and has had 3 courses of antibiotics for a presumed chest infection in the last 3 months. In the last 2 days she has been struggling to cope at home and has had two falls.

Blood tests show :

Erythrocyte Sedimentation Rate (ESR) 60 mm/hour g/l

Creatinine Kinase 8000 U/L

Which of the following blood tests would be LEAST helpful in the work up?

	Autoimmune profile
	FBC
	AST and ALT
	Urine myoglobin
	Renal biopsy

Dashboard

Overall score: 0%

1 -

□ Question 84 of 94



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Blood tests show :

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Creatinine Kinase 8000 U/L

Which of the following blood tests would be LEAST helpful in the work up?

	Autoimmune profile
	FBC
	AST and ALT
	Urine myoglobin
	Renal biopsy

Dashboard

Overall score: **0%**

1 -

□ Question 85 of 94



A 72-year-old woman attends rheumatology clinic for review of her osteoporosis treatment. She had been diagnosed with osteoporosis five years previously on the basis of a DEXA scan (see results below). At that time, the DEXA scan had been arranged by her GP due to a strong family history of osteoporosis (maternal hip fracture) and the patient having received multiple courses of corticosteroids as treatment for asthma. The patient has never sustained a fracture of her hip, wrist or vertebrae. Following the initial diagnosis, the patient had been treated with alendronic acid 70 mg weekly. She had not experienced any adverse effects from this medication although reported finding the need to drink copious water with her dose onerous.

The patient's past medical history was significant for asthma, although the patient reported that this was now much better controlled than previously and she had not required any corticosteroid treatment in several years. She denied any history of thyroid disease or rheumatoid arthritis. The patient had never smoked and very rarely consumed any alcohol.

Details from the patient examination in clinic and selected results from her DEXA scans are given below.

Height	160 cm
Weight	65 kg
Femoral neck BMD (5 years previously)	T -2.6 g / cm ²
Femoral neck BMD (present day)	T -1.9 g / cm ²
FRAX 10-year probability of major osteoporotic fracture	18 %
FRAX 10-year probability of hip fracture	6.8 %

What is the most appropriate management of the patient's osteoporosis?

	Discontinue alendronic acid and initiate treatment with denosumab
	Hold further osteoporosis treatment with repeat DEXA scan in two years
	Continue treatment with alendronic acid with repeat DEXA scan in five years

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	Hold further osteoporosis treatment with repeat DEXA scan in five years

Dashboard

Overall score: **0%**
1 -

□ Question 85 of 94



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Dashboard

Overall score: **0%**
1 -

□ Question 85 of 94



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Dashboard

Overall score: **0%**

1 -



□ Question 86 of 94

□ □

A 65-year-old woman is seen in the rheumatology clinic. She has complained about 'arthritis' in her hands and feet for many years:



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What is the most likely diagnosis?

	Paget's disease
	Primary hyperparathyroidism

	Rheumatoid arthritis
	Osteoarthritis
	Gout

Dashboard

Overall score: **0%**
1 -

□ Question 86 of 94

□ □

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What is the most likely diagnosis?

Paget's disease

Primary hyperparathyroidism

	Rheumatoid arthritis
	Osteoarthritis
	Gout

Dashboard

Overall score: **0%**
1 -

□ Question 87 of 94

□ □

62-year-old woman complains of knee pain. She has struggled with pain for several years. She finds that it gets worse through the day and is relieved by resting. She does not normally come and see doctors but the pain has gotten to the point where she would like additional treatment. She is not keen on surgery as of yet. She is known to have osteoarthritis. She has been taking paracetamol but not tried any other medication. What is the most appropriate strategy to further help relieve her pain?

	Codeine
	Oral NSAIDs
	Topical NSAIDs
	Intra-articular steroid injection
	Oral morphine

Dashboard

Overall score: 0%

1 -

□ Question 87 of 94

□ □

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	Codeine
	Oral NSAIDs
	Topical NSAIDs
	Intra-articular steroid injection
	Oral morphine

Dashboard

Overall score: **0%**

1 -

□ Question 88 of 94



A 40 year old woman was diagnosed with fibromyalgia 6 months previously following review in Rheumatology outpatient clinic. She was subsequently discharged from clinic with a recommendation for trial of pregabalin therapy. The patient has now returned to her General Practitioner to report on-going symptoms of severe widespread body pain, severe fatigue and difficulty in concentrating on daily activities. The patient did not feel that starting pregabalin 6 months previously had offered any improvement in her symptoms. In fact, her symptoms had been causing more problems and she had recently been unable to attend her work as a teaching assistant.

The patients past medical history included a duodenal ulcer five years previously, induced by the combination of non-steroidal anti-inflammatory drug use and alcohol consumption. She also had a previous diagnosis of irritable bowel disease and had a tendency to become severely constipated. There were no known allergies to medications. The patient lived alone and in addition to her teaching assistant job was her elderly mothers primary carer.

On assessment by her General Practitioner, there was no evidence of inflammatory arthritis but multiple tender spots were demonstrated across the patients body. The patient was clearly distressed and frustrated with her on-going symptoms and had concerns for her ability to continue in paid employment. The patients affect was otherwise unremarkable with a good rapport maintained throughout. She denied any symptoms of low mood or thoughts of self-harm.

Following further discussion, the patient was keen to try a further pharmacological therapy as treatment for her fibromyalgia symptoms. She was reluctant to engage with suggested psychological therapies.

What is appropriate next line pharmacological treatment for the patients fibromyalgia?

	Continue pregabalin, start duloxetine
	Continue pregabalin, start ibuprofen as required
	Stop pregabalin, start duloxetine
	Stop pregabalin, start amitriptyline
	Continue pregabalin, start fluoxetine

Dashboard

Overall score: **0%**

1 -

□ Question 88 of 94



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	Continue pregabalin, start fluoxetine

Dashboard

Overall score: **0%**

1 -

□ Question 89 of 94



A 29 year old woman is referred to Rheumatology clinic after experiencing all over pain throughout her body over the past two years. This has been associated with not feeling refreshed in the morning after a nights sleep and the patient finding difficulty in concentrating on her work in a call centre. She denied any history of skin rashes, photosensitivity, hair loss, swallowing difficulties or dry eyes and she had not lost any weight. Past medical history was significant for a previous diagnosis of mild depression treated with a course of cognitive behavioural therapy. There was no family history of connective tissue disease. The patient lived with her husband and two young children and reported some on-going concerns over the family finances. She smoked 10 cigarettes per day but rarely drank alcohol.

Initial review of the patient had demonstrated no evidence of inflammatory arthritis but showed the patient had significant muscular tenderness at multiple sites throughout the body.

Initial blood tests requested after clinic review had been unremarkable and included negative rheumatoid factor and negative anti-nuclear antibody. X-rays of the patients hands and feet did not demonstrate any evidence of erosive arthropathy.

At a follow-up review of the patient with the above results it was discussed that no evidence of inflammatory arthritis had been uncovered and that the patients symptoms were most likely consistent with fibromyalgia. Given her previous experience with cognitive behavioural therapy the patient was keen to adopt positive lifestyle strategies to reduce her symptoms rather than pharmacological treatment.

Which non-pharmacological treatment below has most evidence of effectiveness in fibromyalgia?

	Strength training
	Balneotherapy
	Aerobic exercise
	Electrotherapy
	Acupuncture

Overall score: **0%**

1 -

□ Question 89 of 94



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Which non-pharmacological treatment below has most evidence of effectiveness in fibromyalgia?

	Strength training
	Balneotherapy
	Aerobic exercise
	Electrotherapy
	Acupuncture

Dashboard

Overall score: **0%**

1 -

Question 90 of 94

□ □

A 79-year-old woman complains of pain in her hands. An x-ray is ordered:



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Based on the x-ray findings, what is the most likely diagnosis?

	Gout
	Primary hyperparathyroidism
	Rheumatoid arthritis

	Osteoarthritis
	Paget's disease

Dashboard

Overall score: 0%

1 -

□ Question 90 of 94

□ □

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Based on the x-ray findings, what is the most likely diagnosis?

Gout

Primary hyperparathyroidism

Rheumatoid arthritis

	Osteoarthritis
	Paget's disease

Dashboard

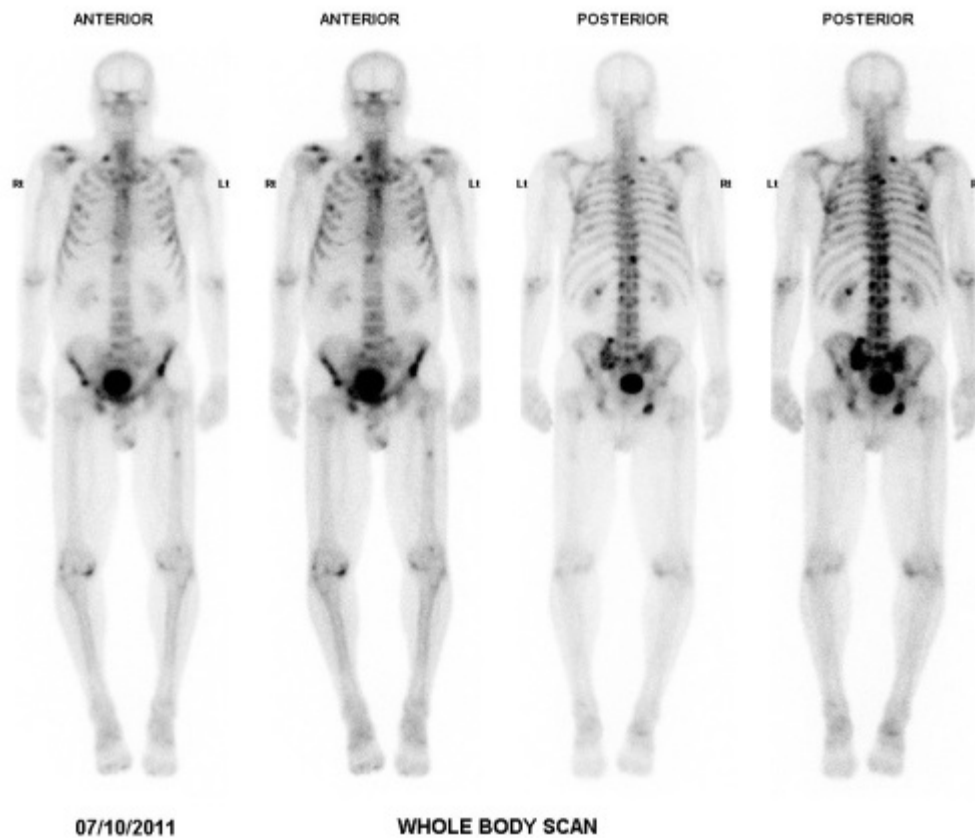
Overall score: **0%**
1 -

Question 91 of 94



A 75-year-old man is investigated for widespread bone pain which has been getting progressively worse over the past six months. The pain is particularly bad around his back and ribs and is now no longer controlled with standard analgesia.

An isotope bone scan is requested:



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Which next test is most likely to reveal the underlying diagnosis?

	Colonoscopy
	Adjusted serum calcium
	Prostate specific antigen
	Serum alkaline phosphatase
	Electrophoresis

Dashboard

Overall score: 0%

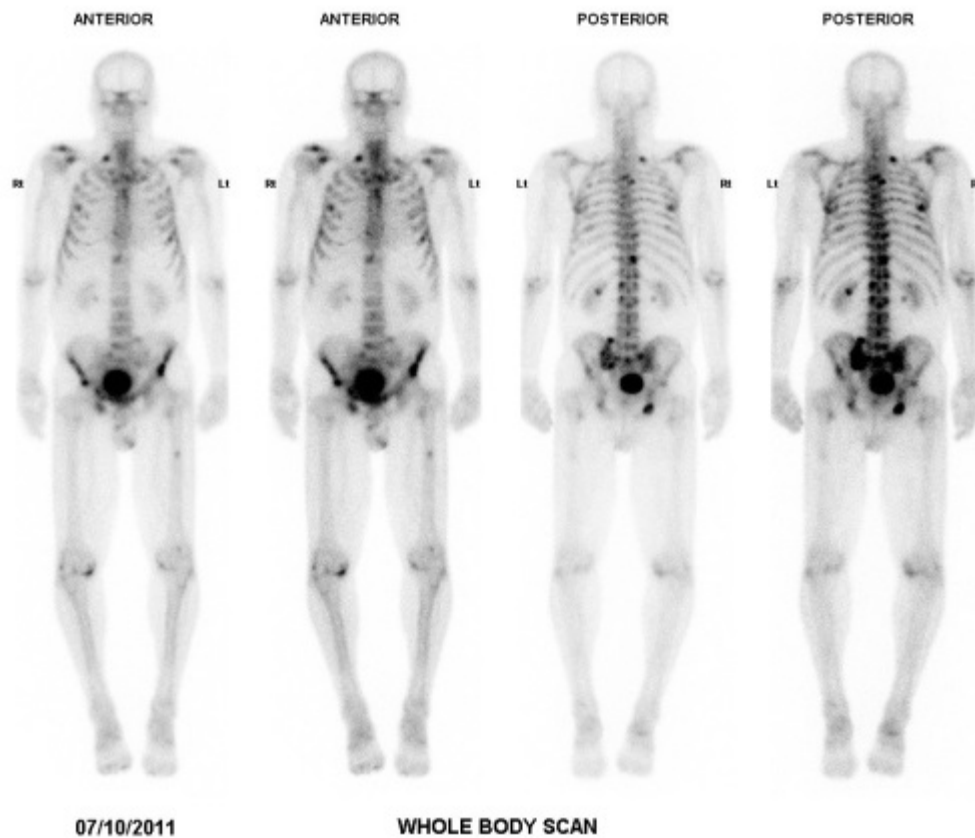
1 -

Question 91 of 94



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An isotope bone scan is requested:



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Which next test is most likely to reveal the underlying diagnosis?

	Colonoscopy
	Adjusted serum calcium
	Prostate specific antigen
	Serum alkaline phosphatase
	Electrophoresis

Dashboard

Overall score: **0%**
1 -

□ Question 92 of 94

□ □

A 72 year old presents by blue light ambulance to A&E. He has been increasingly drowsy over the past 4 days and has not been out of bed for the past 48 hours. His wife reports two episodes of sweating and a high temperature during this period. He has been admitted three times in the last 9 months with urinary tract infections and is awaiting a transurethral resection of his prostate for benign prostatic hypertrophy. His other past medical history includes type 2 diabetes mellitus, diagnosed 4 years ago, and rheumatoid arthritis, diagnosed 16 years ago. His wife tells you that he appears to be prone to infections over the past few years. He normally walks with a stick but his exercise tolerance has been decreasing since doctors told him that he had 'scarring of his lungs from his rheumatoid.' On examination, he is sleepy but easily rousable and orientated to time and place. He is cool peripherally, with dry mucous membranes and JVP +1cm above the angle of Louis. Blood pressure measures 82/55mmHg, heart rate is 105/minute. You note conjunctival pallor, bilateral ulnar deviation of his hands, an inflamed second MTP joint and nodules beneath both elbows. Auscultation of the chest demonstrates bibasal inspiratory fine crackles. Abdominal examination demonstrates a 2cm liver edge and a 13cm spleen. Neurological examination is unremarkable. Routine blood tests and blood cultures are taken. What is the most appropriate treatment?

	Oral antibiotics as per local guidelines for mild-moderate community acquired pneumonia
	Intravenous antibiotics as per local guidelines for severe community acquired pneumonia
	Intravenous antibiotics as per local guidelines for urosepsis
	Intravenous antibiotics as per local guidelines for intra-abdominal sepsis
	Intravenous antibiotic as per local guidelines for neutropenic sepsis

Dashboard

Overall score: 0%

1 -

□ Question 92 of 94

□ □

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Dashboard

Overall score: **0%**

1 -

□ Question 93 of 94



A 74-year-old woman attends rheumatology clinic for a review of her osteoporosis treatment. The patient had been diagnosed with osteoporosis on a DEXA scan five years previously after she fell and sustained a Colles fracture on the left side. Following this diagnosis, the patient had been initiated on treatment with alendronic acid.

In clinic, the patient reported that she had recently been suffering from nagging back pain over the past few weeks. She denied any history of recent falls or other trauma.

Past medical history was significant for rheumatoid arthritis, diagnosed when the patient was 28 years old. Following this diagnosis, she had received prolonged treatment with corticosteroids in association with a variety of disease modifying drugs. Ultimately, good control of her arthritis had been achieved using methotrexate (10 mg weekly) and the patient had not required corticosteroid treatment for many years. The patient reported no family history of osteoporosis or fragility fractures. She did not smoke or drink any alcohol.

The patient reported no concerns or side effects associated with taking her weekly alendronic acid (70 mg weekly).

Examination of the patients spine demonstrated mid-line point tenderness around the T12 - L1 level. Neurological examination of the lower limbs was unremarkable.

Thoracolumbar spine x-ray: anterior height loss of T12 vertebrae, otherwise unremarkable

Height	150 cm
Weight	55 kg
Femoral neck BMD (5 years previously)	T - 3.2
Femoral neck BMD (present day)	T - 2.4
FRAX 10-year probability of major osteoporotic fracture	27 %
FRAX 10-year probability of hip fracture	8.7 %

What is the most appropriate management of the patient's osteoporosis?

Hold further osteoporosis treatment with repeat DEXA scan in two years

	Hold further osteoporosis treatment with repeat DEXA scan in five years
	Discontinue alendronic acid and initiate treatment with denosumab
	Discontinue alendronic acid and initiate treatment with zoledronic acid
	Continue treatment with alendronic acid with repeat DEXA scan in five years

Dashboard

Overall score: **0%**

1 -

□ Question 93 of 94



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Dashboard

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1 -

□ Question 93 of 94



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Dashboard

Overall score: **0%**
1 -



□ Question 94 of 94

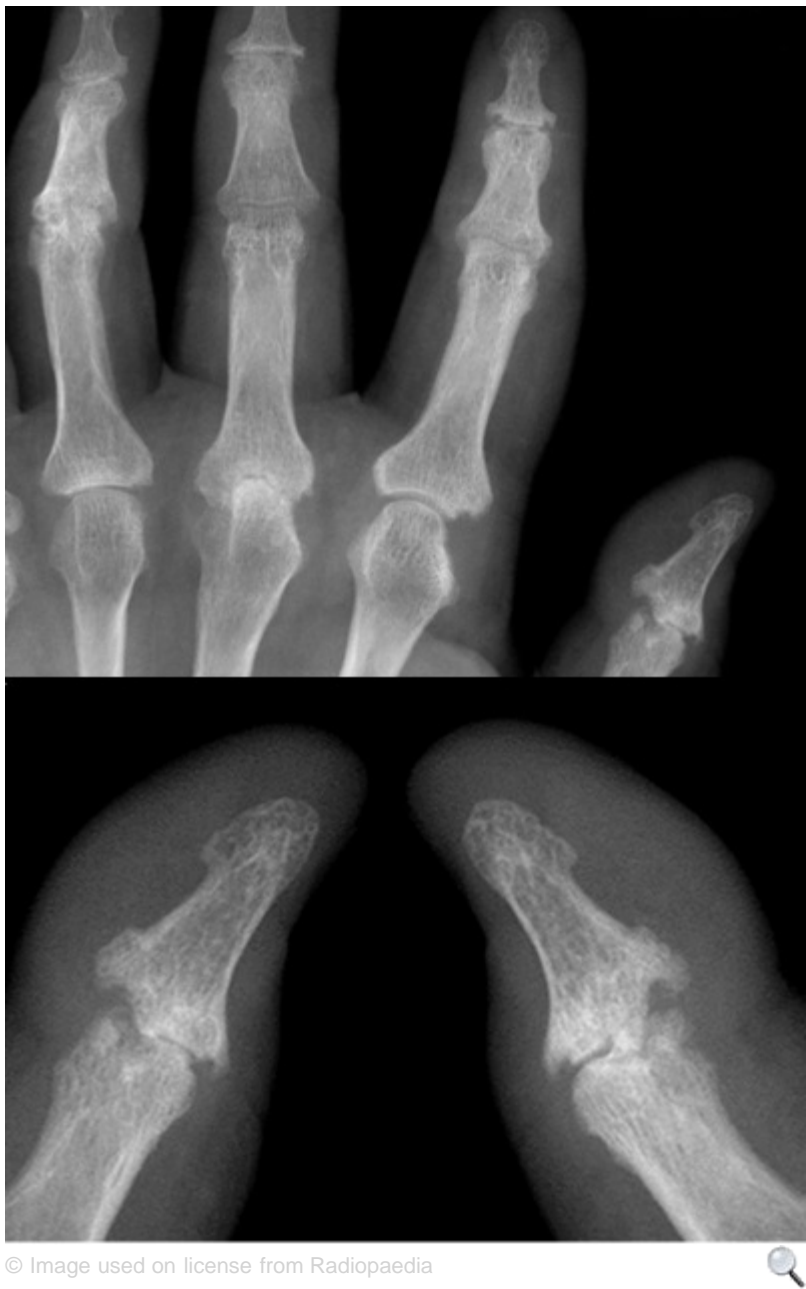


A 54-year-old man is referred to rheumatology with a 6 month history of pain and stiffness in his fingers. He had also been feeling generally tired for the past few weeks. His GP has performed blood tests which show the following:

Hb	13.1 g/l
Platelets	$411 \times 10^9/l$
WBC	$4.5 \times 10^9/l$
CRP	35 mg/l
Rheumatoid factor	Negative

An x-ray of his hands is shown below:





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What is the most likely diagnosis?

	Gout
	Psoriatic arthritis
	Osteoarthritis
	Rheumatoid arthritis
	Hyperparathyroidism

Overall score: **0%**

1 -

□ Question 94 of 94

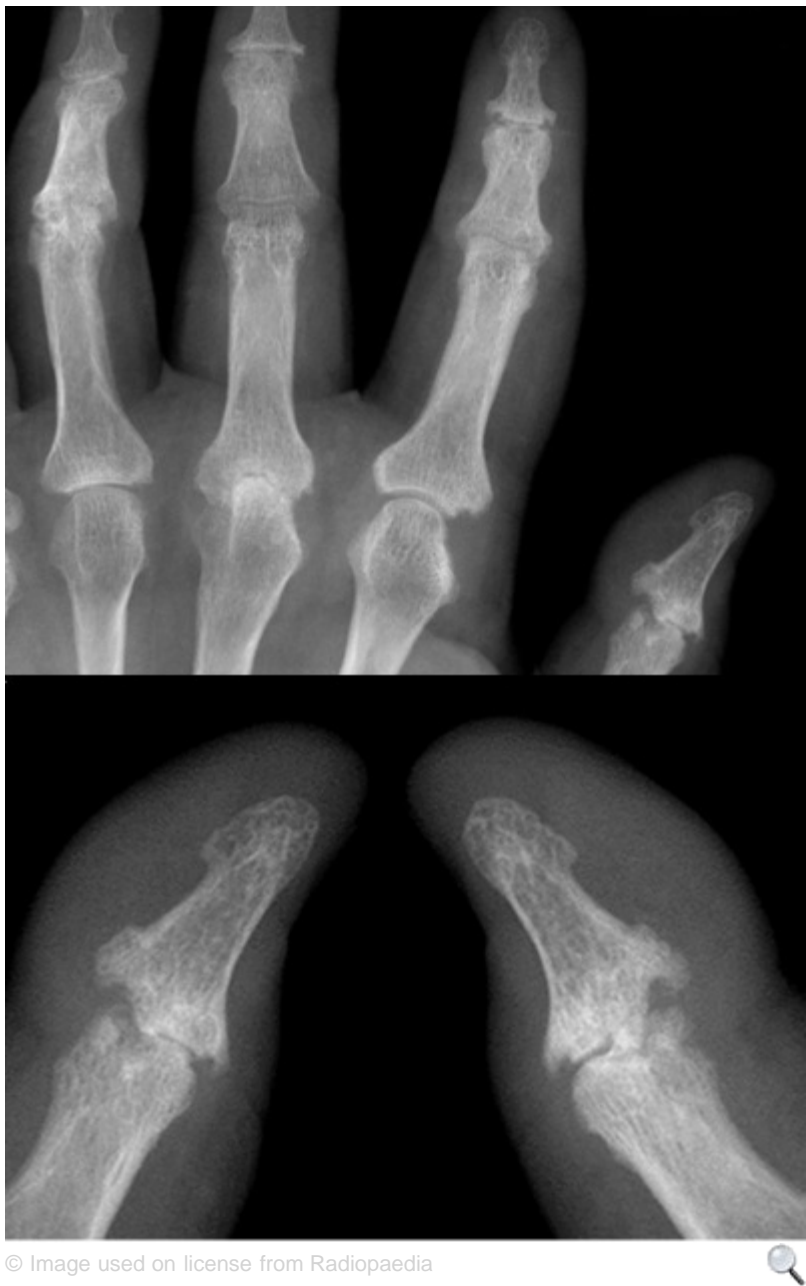


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1 -

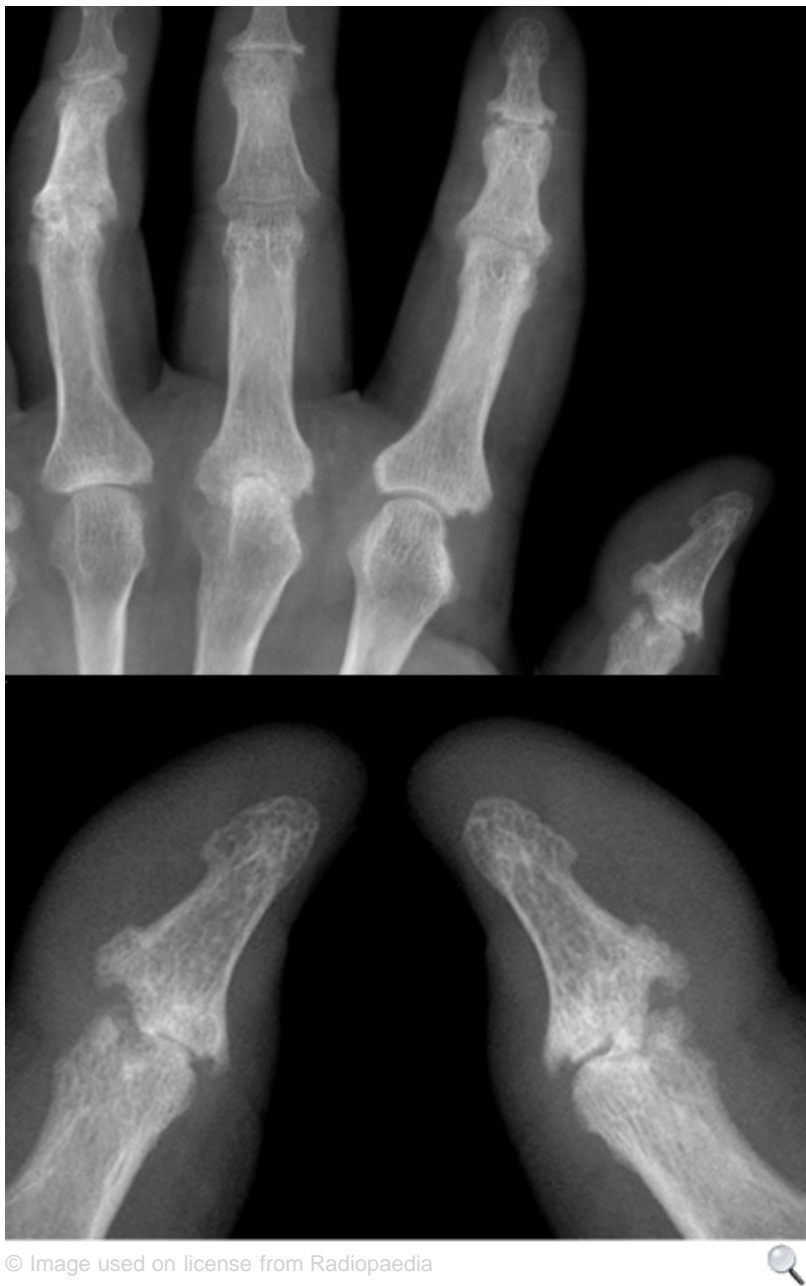
Question 94 of 94

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Overall score: **0%**

1 -

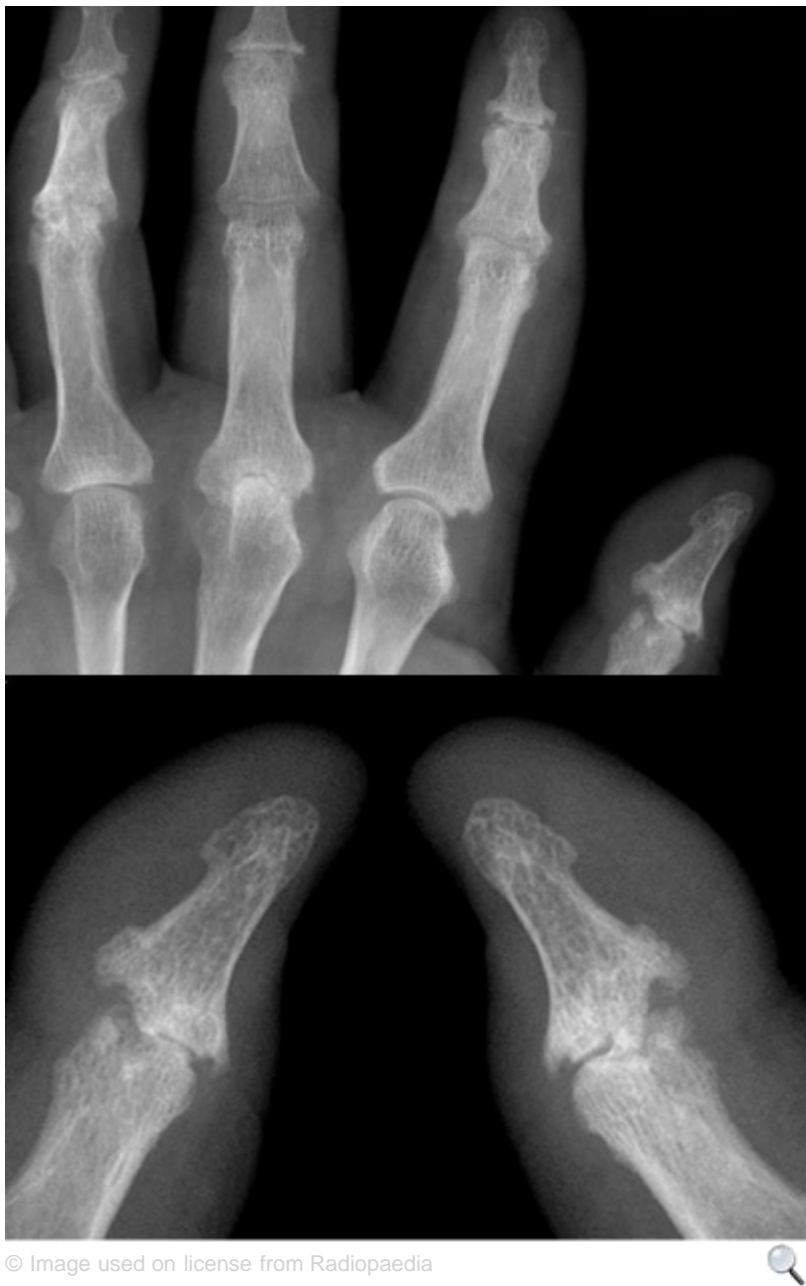
□ Question 94 of 94

A 54-year-old man is referred to rheumatology with been feeling generally tired for the past few weeks.

Hb	13.1 g/l
Platelets	$411 \times 10^9/l$
WBC	$4.5 \times 10^9/l$
CRP	35 mg/l
Rheumatoid factor	Negative

An x-ray of his hands is shown below:





© Image used on license from Radiopaedia



What is the most likely diagnosis?

	Gout
	Psoriatic arthritis
	Osteoarthritis
	Rheumatoid arthritis
	Hyperparathyroidism

Overall score: **0%**

1 -

□ Question 94 of 94

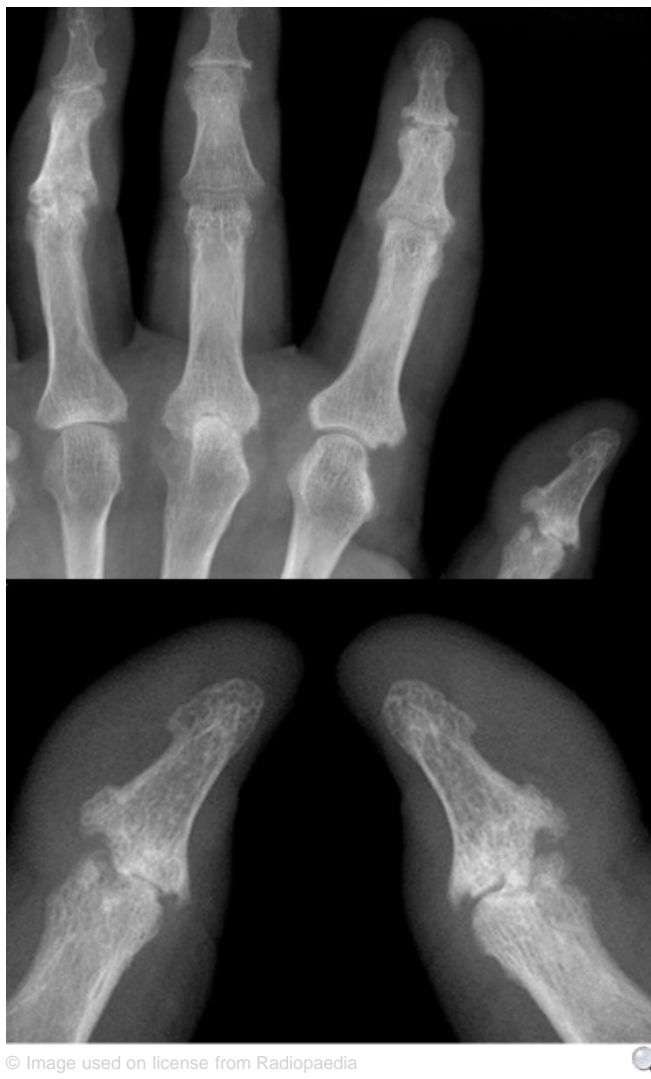
□

A 54-year-old man is referred to rheumatology with a 6 month history of pain and stiffness in his fingers. He had also been feeling generally tired for the past few weeks. His GP has performed blood tests which show the following:

Hb	13.1 g/l
Platelets	$411 \times 10^9/l$
WBC	$4.5 \times 10^9/l$
CRP	35 mg/l
Rheumatoid factor	Negative

An x-ray of his hands is shown below:





© Image used on license from Radiopaedia



What is the most likely diagnosis?

	Gout
	Psoriatic arthritis
	Osteoarthritis
	Rheumatoid arthritis
	Hyperparathyroidism

Overall score: **0%**

1 -



□ Question 1 of 156



A 46-year-old male was transferred to the Intensive Care Unit (ICU) as an emergency admission. He had been scheduled to undergo an elective open cholecystectomy under general anaesthetic. He had been intubated and ventilated successfully, but a few minutes into the operation he had become tachycardic, with his heart rate rising from a resting rate of 72 bpm to a rate of 142bpm. His oxygen saturations dropped down to 92% on 15 litres of oxygen per minute, and his blood pressure rose from his baseline of 114/78 mmHg up to 162/98 mmHg. In addition, his end tidal CO₂ concentration rose, despite several checks to ensure that the tracheal tube was correctly sited. His past medical history was unremarkable except for an appendicectomy under general anaesthetic aged 26 yrs old.

The operation was abandoned. Upon his arrival to ICU, he was intubated and ventilated, maintaining an oxygen saturation of 96% on 15 litres per minute of oxygen. He appeared flushed and had significant muscle rigidity. His blood pressure had risen to 174/102 mmHg, and his heart rate was 136bpm. His temperature was 38.2 C. Examination of the cardiovascular revealed vasodilated peripheries with a bounding pulse and normal heart sounds. Auscultation of the lungs revealed good air entry in all zones and a correctly cited tracheal tube. Examination of the abdomen was unremarkable. Examination of the neurological system confirmed the presence of equal and reactive pupils, with generalised muscle hypertonicity and masseter muscle spasm. A central venous catheter and arterial line were inserted. The central venous pressure was 9 cm.

An arterial blood gas sample on 15 litres of oxygen was taken:

pH	7.26
HCO ₃	18 mmol/l
PaO ₂	17 kPa
PaCO ₂	7.6 kPa
Na ⁺	139 mmol/l
K ⁺	7.1 mmol/l

What is the next best immediate management step?

	Commence IV labetalol infusion
--	--------------------------------

	Commence IV meropenem
	Commence high dose IV hydrocortisone
	Commence IV dantrolene
	Arrange immediate therapeutic hypothermia

Dashboard

Overall score: **0%**

1 -

Question 1 of 156



A 46-year-old male was transferred to the Intensive Care Unit (ICU) as an emergency admission. He had been scheduled to undergo an elective open cholecystectomy under general anaesthetic. He had been intubated and ventilated successfully, but a few minutes into the operation he had become tachycardic, with his heart rate rising from a resting rate of 72 bpm to a rate of 142bpm. His oxygen saturations dropped down to 92% on 15 litres of oxygen per minute, and his blood pressure rose from his baseline of 114/78 mmHg up to 162/98 mmHg. In addition, his end tidal CO₂ concentration rose, despite several checks to ensure that the tracheal tube was correctly sited. His past medical history was unremarkable except for an appendicectomy under general anaesthetic aged 26 yrs old.

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	Commence high dose IV hydrocortisone
	Commence IV dantrolene
	Arrange immediate therapeutic hypothermia

Dashboard

Overall score: **0%**

1 -

Question 2 of 156

A 45 year-old Russian woman complains of a 2 week history of joint pain affecting her wrists, shoulders and knees bilaterally. She also reports calf pain bilaterally. She has been started on first line treatment for pulmonary tuberculosis 2 months previously. Symptoms resolved after the addition of aspirin.

Which drug is most likely causing her symptoms?

<input type="checkbox"/>	Rifampicin
<input type="checkbox"/>	Isoniazid
<input type="checkbox"/>	Pyrazinamide
<input type="checkbox"/>	Ethambutol
<input type="checkbox"/>	Streptomycin

Dashboard

Overall score: 0%

1 -

Question 2 of 156

□ □

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Which drug is most likely causing her symptoms?

	Rifampicin
	Isoniazid
	Pyrazinamide
	Ethambutol
	Streptomycin

Dashboard

Overall score: **0%**

1 -

Question 3 of 156

□ □

A 55-year-old lady presents to her general practitioner with a painful rash on her breasts. The rash has developed over the last 24 hours and although initially diffuse and red is now well demarcated and a much darker red. She was started on warfarin five days ago for a deep vein thrombosis diagnosed on ultrasound doppler. She has a past medical history of hypothyroidism, type two diabetes mellitus, thromboembolism and obesity. She remembers having been on warfarin at least once before for previous deep vein thrombosis but does not remember ever having had this rash. Her blood tests today are as follows.

Prothrombin time	21.4 seconds
INR	2.1 ratio

What is the most likely diagnosis?

	Protein S deficiency
	Idiosyncratic drug reaction
	Stevens Johnson syndrome
	Warfarin toxicity
	Protein C deficiency

Dashboard

Overall score: 0%

1 -

□ Question 3 of 156

□ □

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	Protein S deficiency
	Idiosyncratic drug reaction
	Stevens Johnson syndrome
	Warfarin toxicity
	Protein C deficiency

Dashboard

Overall score: **0%**

1 -

□ Question 4 of 156



A 19-year-old woman is referred to the acute medical team after presenting to the emergency department. The patient reports taking an overdose of paracetamol that evening, following an argument with her mother. She immediately regretted taking the overdose and asked her mother to take her to the hospital. She is now very upset and anxious that she has caused herself serious harm and is requesting treatment.

The patient took just under two packets of 500 mg paracetamol tablets (an estimated 28 tablets), 40 minutes prior to presentation to hospital. She denied any history of mental or physical health problems, and had never taken an overdose before. She took no regular medications and did not drink alcohol.

Examination revealed an alert but anxious young woman with observations within normal physiological parameters, and no abnormal physical signs.

Haemoglobin	128 g / dL
Mean cell volume	95.0 fl
White cell count	8.4×10^9 / microlitre
Platelets	198×10^9 / microlitre
Urea	4.3 mmol / L
Creatinine	67 micromol / L
Sodium	137 mmol / L
Potassium	4.3 mmol / L
Albumin	45 g / L (reference 35-50)
Alkaline phosphatase	56 U / L (reference 35-100)
ALT	34 U / L (reference 3-36)
Bilirubin	15 micromol / L (reference < 26)
International normalised ratio	1.1 (reference 0.8-1.2)

What is the most appropriate management of the patient's paracetamol overdose?

	Treatment with activated charcoal if 4-hour paracetamol level > 100 mg / L
	Immediate treatment with acetylcysteine
	Haemodialysis
	Immediate treatment with methionine
	Immediate treatment with activated charcoal

Dashboard

Overall score: 0%

1 -

□ Question 4 of 156



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1 -

Question 4 of 156



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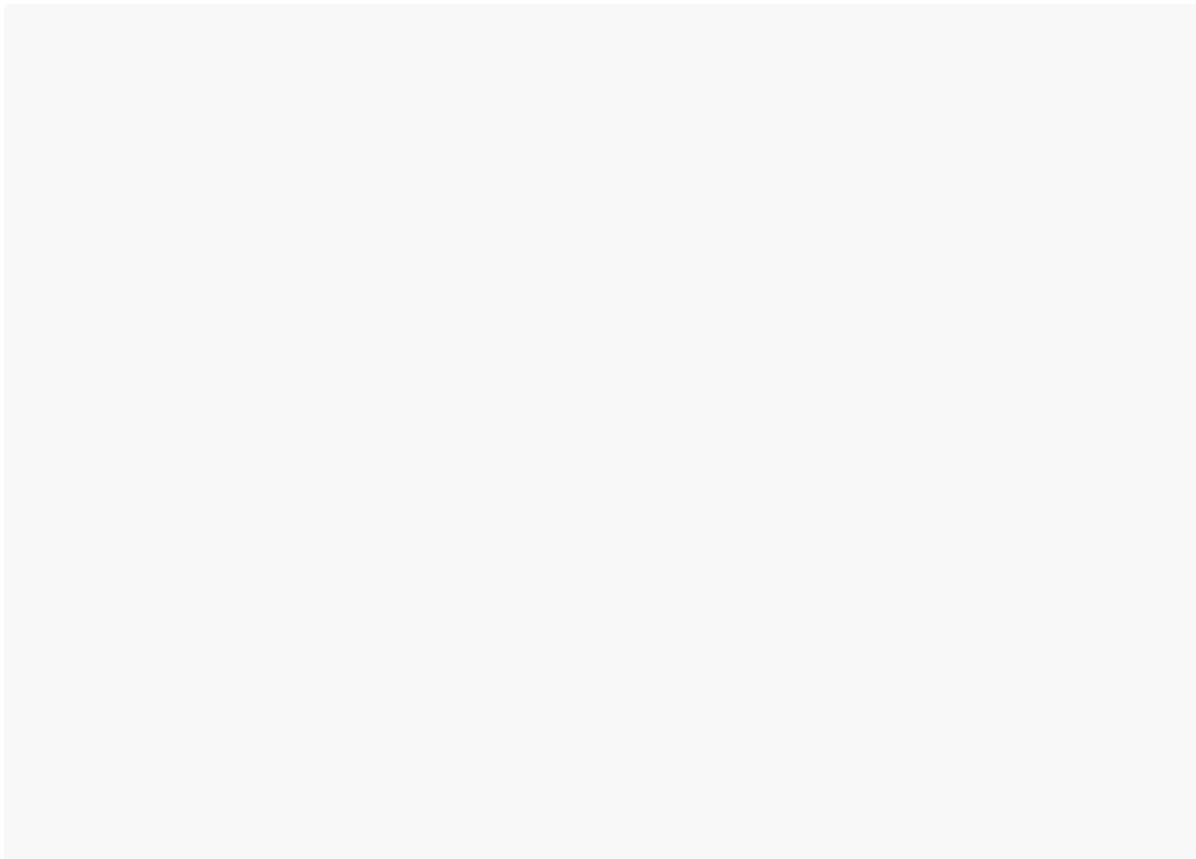
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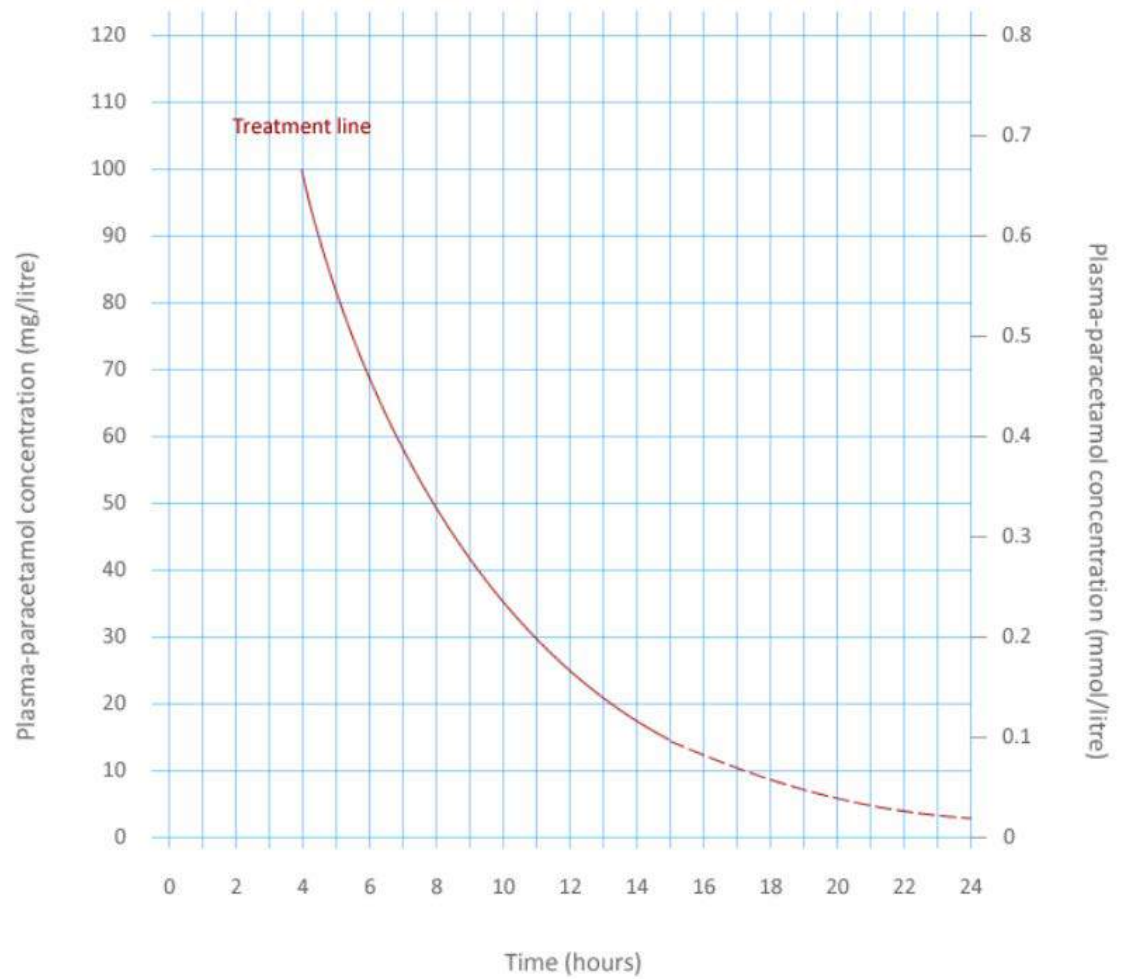
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	Haemodialysis
	Immediate treatment with methionine
	Immediate treatment with activated charcoal

Dashboard

Overall score: 0%

1 -





Question 5 of 156



A 47 year old Latvian man is brought to the Emergency Department by two of his friends. He is confused and aggressive and walks with an unsteady gait. History is difficult to obtain from the patient due to slurring of his speech and a slight language barrier. You note that he fails to meet your gaze when you are talking to him. Examination shows a GCS of 15/15 but he is drowsy and irritable. There is a vague smell of alcohol on his breath. He is flushed in the face and his eyes are red and hyperaemic. Pupils are slow to react to direct light but equal in size. Cardiorespiratory examination is unremarkable aside from a respiratory rate of only 8/min but SpO₂ is 98% on air. Abdomen is soft and non tender with no hepatomegaly and no signs of chronic liver disease. Despite the department being well lit he asks you to turn the lights on.

Biochemistry reveals:

Haemoglobin	149g/L	Sodium	150mmol/L	pH	7.25
White cells	8.9x10 ⁹ /L	Potassium	5.9mmol/L	pCO ₂	3.9kPa
Neutrophils	5.9x10 ⁹ /L	Urea	13.8mmol/L	pO ₂	12.6kPa (air)
Platelets	229x10 ⁹ /L	Creatinine	156mol/L	HCO ₃ ⁻	12.5mmol/L
Prothrombin time	11 sec	Glucose	24.7mmol/L	BE	-13.2mEq/L
Ethanol	110mg/dL	Chloride	100mmol/L	Lactate	2.0mmol/L
Anion gap	38	Osmolar gap	25 (-10 to +15)		

What is the most appropriate next step in the management of this patient?

	Begin high dose oral folic acid and vitamin B complex
	Establish IV access and begin fast fluids with Pabrinex I+II (Vitamin B12)
	Establish IV access and send blood for methanol levels; give oral ethanol in the form of neat 40% whiskey at a dose of 175ml
	Establish IV access and send blood for methanol levels; begin IV fomepizole 1000mg in 500ml 5% dextrose

	over 30 minutes
	Refer to Intensive Care to begin haemofiltration

Dashboard

Overall score: **0%**

1 -

Question 5 of 156



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Dashboard

Overall score: **0%**
1 -

□ Question 6 of 156

□ □

A 42 year old computer programmer is brought to the Emergency Department by his wife with chest pains. He is haemodynamically stable with a blood pressure of 105/69mmHg and a heart rate of 92bpm but he is peripherally shut down with cool, dusky extremities and weak peripheral pulses. He complains of crushing central and left sided chest pain with some evidence of sweating and pallor. He also complains of severe global headache. His chest is clear and his heart sounds are normal. Chest x-ray is unremarkable.

An ECG shows pronounced inferior and lateral ST segment depression. A baseline troponin at 4 hours since onset of chest pain is raised. His wife tells you he has been taking clarithromycin from the GP for the past 6 days for a chest infection and she has been concerned he has been acting strangely since starting this with confusion, excitability, delusions and visual hallucinations. He has also had stomach cramps and diarrhoea for the past 2 days. His medical history is significant for migraines for which he takes PRN zolmitriptan and prophylactic ergotamine.

Which one of the following explains this patients symptoms most completely?

	Acute non-ST segment myocardial infarction
	Acute meningoencephalitis
	Clarithromycin induced haemolytic uraemic syndrome (HUS)
	Ergotism
	Serotonin syndrome

Dashboard

Overall score: 0%

1 -

Question 6 of 156

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	Ergotism
	Serotonin syndrome

Dashboard

Overall score: **0%**

1 -

□ Question 7 of 156



A 20-year-old female admits to abusing codeine and diclofenac, up to 30 tablets per day. She attends the emergency department demanding help with her addiction. Her baseline bloods include:

pH	7.28
PCO ₂	2.9 kPa
PO ₂	8.5 kPa
HCO ₃ ⁻ 16 mmol/l	

Na ⁺	130 mmol/l
K ⁺	6 mmol/l
Cl ⁻	110 mmol/l
HCO ₃ ⁻	16 mmol/l

What is the most likely diagnosis?

	Lactic acidosis
	Type 1 renal tubular acidosis
	Type 2 renal tubular acidosis
	Type 4 renal tubular acidosis
	Ketoacidosis

Overall score: **0%**

1 -

Question 7 of 156

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	Type 4 renal tubular acidosis
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Overall score: **0%**

1 -

Question 7 of 156



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	Type 4 renal tubular acidosis
	Ketoacidosis

Dashboard
Overall score: 0% 1 -



Question 8 of 156

□ □

A 26 year old asthmatic woman is admitted to hospital following a deliberate overdose of her usual theophylline tablets.

Which one of the following may be a complication of theophylline toxicity?

	Hypoglycaemia
	Atrioventricular nodal blockade
	Bronchoconstriction
	Increased myocardial contractility
	Hyperkalaemia

Dashboard

Overall score: **0%**

1 -

Question 8 of 156

□ □

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	Atrioventricular nodal blockade
	Bronchoconstriction
	Increased myocardial contractility
	Hyperkalaemia

Dashboard

Overall score: **0%**

1 -

Question 9 of 156

□ □

A 20-year-old man is brought to the Emergency Department by the Police with agitation and aggression. He is accompanied by a friend, who says they had been out celebrating his brother's birthday and that the patient may have 'snorted something'.

He recalls the patient complaining of intense nasal pain for some time after he allegedly took the substance, but it soon settled and he seemed in good spirits; talking enthusiastically about seeing vivid lights and waves emanating from the club's speakers. As the night went on, however, he became increasingly disturbed; shouting at other clubgoers and complaining about hearing threatening voices.

On examination, his temperature is 39.2°C. His pulse is 117bpm and his blood pressure is 181/98mmHg. He is difficult to examine due to intermittent aggression, and he has lashed out on several occasions.

In order to ensure his own safety, a decision to sedate the patient is made. The patient is successfully restrained and cannulated but suffers a tonic-clonic seizure shortly afterward. He is given 4mg IV lorazepam, but then suffers a cardiac arrest from which he cannot be resuscitated.

Which drug is most likely to be responsible?

	Lysergic acid diethylamide (LSD)
	Nexus (2CB)
	Spice
	Gamma-hydroxybutyric acid (GHB)
	Methoxetamine

Dashboard

Overall score: 0%

Question 9 of 156

□ □

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	Spice
	Gamma-hydroxybutyric acid (GHB)
	Methoxetamine

Dashboard

Overall score: **0%**

□ Question 10 of 156

□ □

A 26 year old male is admitted to hospital with difficulty in breathing, wheeze and a cough productive of green sputum. He is assessed and determined to have a community acquired lower respiratory tract infection with biochemical and radiological evidence lending weight to this diagnosis. His medical history is significant for capricious asthma and he has been admitted to intensive care previously and ventilated. Currently he is taking salbutamol and formoterol/budesonide inhalers at their maximum doses, montelukast, aminophylline and omalizumab (Xolair) monthly subcutaneous injections.

Which of the following antibiotics is best avoided in this patients treatment?

	Amoxicillin
	Azithromycin
	Ciprofloxacin
	Doxycycline
	Gentamicin

Dashboard

Overall score: 0%

1 -

□ Question 10 of 156

□ □

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	Amoxicillin
	Azithromycin
	Ciprofloxacin
	Doxycycline
	Gentamicin

Dashboard

Overall score: **0%****1** -

Question 11 of 156



A 20-year-old female presents having taken 20 aspirin 500mg tablets in a suicide attempt. She has felt well since and is asymptomatic, and now regrets these actions. She has a background of borderline personality disorder for which she takes olanzapine and has never attempted suicide in the past. She was seen by her GP with a presumed respiratory tract infection one week ago and prescribed amoxicillin. Cardiovascular, respiratory and abdominal examinations are all unremarkable. Her blood gas reveals a ph 7.41, lactate 0.5mmol/L and laboratory bloods are unremarkable other than a salicylate level 4 hours post ingestion of 660mg/L.

Which management step should be taken next?

	Intravenous (IV) Sodium Chloride 0.9%
	Reassure and discharge
	IV Sodium bicarbonate 1.26%
	N-acetylcysteine infusion
	Dialysis

Dashboard

Overall score: 0%

1 -

□ Question 11 of 156

□ □

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	Reassure and discharge
	IV Sodium bicarbonate 1.26%
	N-acetylcysteine infusion
	Dialysis

Dashboard

Overall score: **0%**

1 -

Question 12 of 156



You are the on-call medical doctor called to review a patient in the Emergency Department. A 54 year old male patient with a past history asthma, ischaemic heart disease and transient ischaemic attack has presented with palpitations. His admission ECG shows a regular, narrow complex tachycardia. Vagal manoeuvres have been tried in the department with no success. You decide to give intravenous adenosine in an attempt to chemically cardiovert. An initial dose of 6mg is given into a proximal vein with a large flush. The patient soon loses consciousness and an 11 second ventricular standstill is noted on the rhythm strip before slow return of sinus rhythm.

Which of the patient's medications is most likely to be responsible for this?

	Phyllocontin
	Dipyridamole
	Bisoprolol
	Simvastatin
	Montelukast

Dashboard

Overall score: 0%

1 -

Question 12 of 156



You are the on-call medical doctor called to review a patient in the Emergency Department. A 54 year old male patient with a past history asthma, ischaemic heart disease and transient ischaemic attack has presented with palpitations. His admission ECG shows a regular, narrow complex tachycardia. Vagal manoeuvres have been tried in the department with no success. You decide to give intravenous adenosine in an attempt to chemically cardiovert. An initial dose of 6mg is given into a proximal vein with a large flush. The patient soon loses consciousness and an 11 second ventricular standstill is noted on the rhythm strip before slow return of sinus rhythm.

Which of the patient's medications is most likely to be responsible for this?

	Phyllocontin
	Dipyridamole
	Bisoprolol
	Simvastatin
	Montelukast

Dashboard

Overall score: 0%
1 -

Question 13 of 156

A 56-year-old woman with a history of anxiety, depression, and alcoholism is brought to the Emergency department after a mixed overdose. She is known to take tricyclic anti-depressants, benzodiazepines, and codeine phosphate for chronic pain. On examination her Glasgow coma scale is 8, blood pressure is 90/60 mmHg, her respiratory rate is 9 breaths per minute, and she has dilated pupils bilaterally.

Which of the following is the most appropriate next step?

	Airway support
	IV doxapram
	IV flumazenil
	IV naloxone
	IV sodium bicarbonate

Dashboard

Overall score: 0%

1 -

Question 13 of 156

□ □

A 56-year-old woman with a history of anxiety, depression, and alcoholism is brought to the Emergency department after a mixed overdose. She is known to take tricyclic anti-depressants, benzodiazepines, and codeine phosphate for chronic pain. On examination her Glasgow coma scale is 8, blood pressure is 90/60 mmHg, her respiratory rate is 9 breaths per minute, and she has dilated pupils bilaterally.

Which of the following is the most appropriate next step?

	Airway support
	IV doxapram
	IV flumazenil
	IV naloxone
	IV sodium bicarbonate

Dashboard

Overall score: **0%**

1 -

Question 14 of 156

□ □

A 56-year-old man is brought into hospital with palpitations, restlessness and agitation. His wife tells you he has lost 2 kilograms of weight over the past month. She attributes this to persistent diarrhoea over the same period.

He has a past medical history of persistent atrial fibrillation and takes amiodarone.

On examination, he has a heart rate of 144 beats per minute and his ECG confirms atrial fibrillation with no ischaemic changes. You are unable to palpate any abnormality of the thyroid cartilage.

Investigations are as follows:

TSH	0.1 mU/L
⁹⁹ Tc scan	reduced uptake

Which of the following is the most important step in this patient's immediate management?

	Carbimazole
	Corticosteroids
	Propylthiouracil
	Thyroidectomy
	Increase dose of amiodarone

Dashboard

Overall score: 0%

1 -

Question 14 of 156

□ □

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Which of the following is the most important step in this patient's immediate management?

	Carbimazole
	Corticosteroids
	Propylthiouracil
	Thyroidectomy
	Increase dose of amiodarone

Dashboard

Overall score: **0%**

1 -

Question 15 of 156

□ □

A 23-year-old woman is brought to the Emergency department in a collapsed state. She has taken an overdose of 50x100mg amitriptyline tablets. Her Glasgow coma scale is 9 on arrival, blood pressure is 90/60 mmHg, pulse is 102 beats per minute and regular. Chest is clear.

Investigations:

Na ⁺	135 mmol/l
K ⁺	5.1 mmol/l
HCO ₃ ⁻	15.1 mmol/l
Urea	10.5 mmol/l
Creatinine	155 µmol/l
pH	7.25

ECG: QRS 120ms.

She suffers a short tonic clonic seizure whilst you are examining her.

What is the most important medication to give next?

	Amiodarone
	Bisoprolol
	Lignocaine
	Sodium bicarbonate
	Verapamil

Dashboard

Overall score: **0%**

1 -

Question 15 of 156

□ □

A 23-year-old woman is brought to the Emergency department in a collapsed state. She has taken an overdose of 50x100mg amitriptyline tablets. Her Glasgow coma scale is 9 on arrival, blood pressure is 90/60 mmHg, pulse is 102 beats per minute and regular. Chest is clear.

Investigations:

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HCO ₃ ⁻	15.1 mmol/l
Urea	10.5 mmol/l
Creatinine	155 µmol/l
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ECG: QRS 120ms.

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What is the most important medication to give next?

	Amiodarone
	Bisoprolol
	Lignocaine
	Sodium bicarbonate
	Verapamil

Dashboard

Overall score: **0%**

1 -

□ Question 16 of 156



A 75-year-old man is an inpatient on the orthopaedic ward recovering from an elective knee replacement performed three days previously. The patient's immediate post-operative recovery had been unremarkable and he had begun to mobilise with the ward physiotherapist. Routine observations recorded on the ward had been unremarkable during the previous 24 hours.

During her drug round, the patient's nurse saw the patient suddenly become unable to breathe and clutch at his chest. After calling for help the nurse went to her patient and found him to be in cardiac arrest. Resuscitations attempts were initiated following advanced life-support protocol. Please see the below table for a summary of the patient's electrical rhythm and treatments administered during the initial phases of the resuscitation attempt.

The patient was noted to be in good physical health with his only comorbidity being hypertension, well controlled with medication. The patient's admission clerking recorded that he was a retired schoolteacher who lived independently at home with his wife. A review of the patient's drug chart indicated that he had been receiving subcutaneous enoxaparin as prophylaxis against venous thromboembolism, but that the patient had refused to wear compression stockings during his admission as he found them uncomfortable.

Number of rhythm check	Result of rhythm check	Treatment administered
1	Pulseless electrical activity	IV adrenaline 1 mg
2	Ventricular fibrillation (coarse)	DC shock 150 J
3	Ventricular fibrillation	???

In addition to a further DC shock, what is the appropriate choice of IV drug treatment following the third rhythm check?

	IV adrenaline 1 mg
	IV atropine 400 micrograms & IV amiodarone 300 mg
	No IV drug treatment indicated

	IV adrenaline 1 mg & IV amiodarone 300 mg
	IV atropine 400 micrograms

Dashboard

Overall score: **0%**

1 -

□ Question 16 of 156



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	IV adrenaline 1 mg & IV amiodarone 300 mg
	IV atropine 400 micrograms

Dashboard

Overall score: **0%**

1 -

Question 17 of 156



A 62-year-old man is currently being treated with linezolid for MRSA bacteraemia. Which of the following medications may need to be discontinued whilst this is being administered?

<input type="checkbox"/>	Metformin
<input type="checkbox"/>	Citalopram
<input type="checkbox"/>	Alendronic acid
<input type="checkbox"/>	Candesartan
<input type="checkbox"/>	Atorvastatin

Dashboard

Overall score: **0%**

1 -

Question 17 of 156

□ □

A 62-year-old man is currently being treated with linezolid for MRSA bacteraemia. Which of the following medications may need to be discontinued whilst this is being administered?

	Metformin
	Citalopram
	Alendronic acid
	Candesartan
	Atorvastatin

Dashboard

Overall score: **0%**

1 -

□ Question 18 of 156

□ □

A 64-year-old male presents with known lumbosacral poly-radiculopathy caused by neurosarcoidosis is on immunosuppression with high dose steroids for several months and methotrexate. He is admitted with breathlessness and a dry cough. He is found to have a type 1 respiratory failure. A CT chest shows ground glass shadowing suggesting *Pneumocystis jirovecii* pneumonia. You discuss with the microbiology team who suggest also covering the patient for a bacterial pneumonia and viral pneumonitis.

Which of the following medications could have a potentially life threatening interaction with his current medications?

	Tazocin
	Clarithromycin
	Co-trimoxazole
	Ciprofloxacin
	Aciclovir

Dashboard

Overall score: 0%

1 -

□ Question 18 of 156

□ □

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Which of the following medications could have a potentially life threatening interaction with his current medications?

	Tazocin
	Clarithromycin
	Co-trimoxazole
	Ciprofloxacin
	Aciclovir

Dashboard

Overall score: **0%****1** -

□ Question 19 of 156

□ □

A 74 year old man presents increasing ankle swelling but is otherwise well. The swelling is uncomfortable and impacting on his quality of life. He takes amlodipine 10mg once daily (OD) and losartan 75mg OD. His blood pressure is 128/73 mmHg in clinic. His examination reveals pitting oedema in the ankles but nil else. He had a recent chest radiograph which was normal and an echocardiogram that showed good systolic function. What action would you take?

	Add furosemide 20mg once daily
	Add spironolactone 25mg once daily
	Fluid restrict to 1.5 litres a day
	Reduce amlodipine to 5mg once daily
	Prescribe compression stockings

Dashboard

Overall score: **0%**

1 -

Question 19 of 156

A 74 year old man presents increasing ankle swelling but is otherwise well. The swelling is uncomfortable and impacting on his quality of life. He takes amlodipine 10mg once daily (OD) and losartan 75mg OD. His blood pressure is 128/73 mmHg in clinic. His examination reveals pitting oedema in the ankles but nil else. He had a recent chest radiograph which was normal and an echocardiogram that showed good systolic function. What action would you take?

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Dashboard

Overall score: **0%**

1 -

□ Question 19 of 156

□ □

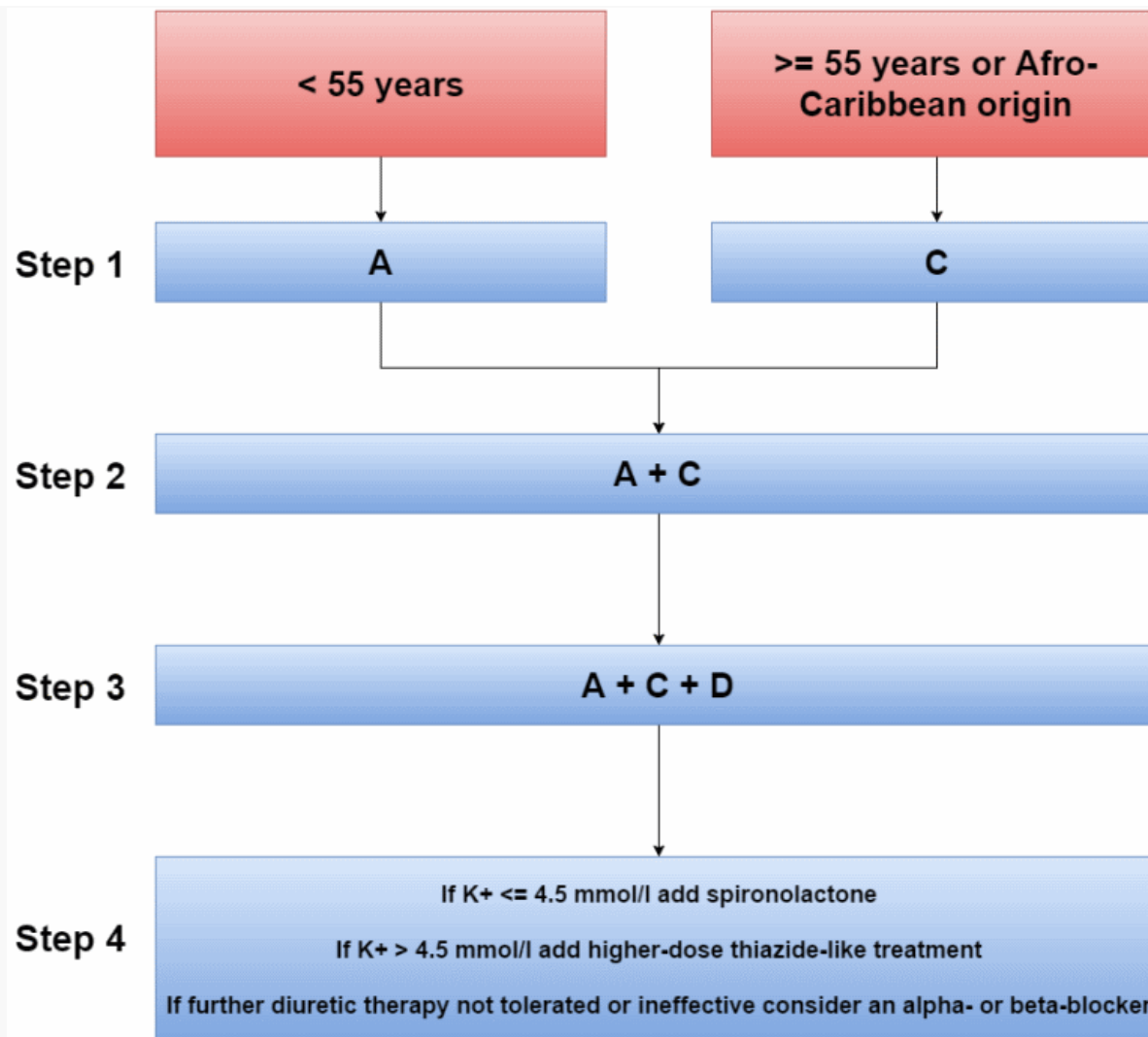
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	Reduce amlodipine to 5mg once daily
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Dashboard

Overall score: 0%

1 -



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Key

A = ACE inhibitor

C = Calcium channel blocker

D = Thiazide Diuretic

Question 20 of 156

□ □

A 54-year-old woman with a background of rheumatoid arthritis is being managed with a weekly dose of 15mg of methotrexate. She has presented for regular review and her blood tests indicate that she has had a significant fall in her cell counts. It is thought that she has methotrexate induced bone marrow failure.

Hb	110 g/l
Platelets	135 * 10 ⁹ /l
WBC	3 * 10 ⁹ /l
Neutrophils	1.9*10 ⁹ /l

What is the best management option?

	Folinic acid
	Ferrous sulphate
	Folic acid
	Iron dextran
	Palifermin

Dashboard

Overall score: 0%

1 -

Question 20 of 156

□ □

A 54-year-old woman with a background of rheumatoid arthritis is being managed with a weekly dose of 15mg of methotrexate. She has presented for regular review and her blood tests indicate that she has had a significant fall in her cell counts. It is thought that she has methotrexate induced bone marrow failure.

Hb	110 g/l
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What is the best management option?

	Folinic acid
	Ferrous sulphate
	Folic acid
	Iron dextran
	Palifermin

Dashboard

Overall score: **0%**

1 -

□ Question 21 of 156



A 45-year-old man was found unconscious at home by his partner, with empty packs of flecainide, codeine and valerian root tablets besides him. He was only found after his partner got worried when he had locked himself in his room and after 4 hours not heard any sounds from the room. He had been depressed for the past couple of months and relations between him and his partner had been strained. He has a past medical history of back pain, paroxysmal atrial fibrillation, angina and hypertension.

On examination, he was drowsy, unable to give a history, with a heart rate of 50bpm, respiratory rate of 16 breaths per minute, oxygen saturation of 96% on air, and a blood pressure of 110/58mmHg. Pupils were 3mm and equal and reactive to light.

Investigations:

Na ⁺	136 mmol/l
K ⁺	4.6 mmol/l
Urea	10.9 mmol/l
Creatinine	110 µmol/l
Serum bilirubin	30 µmol/l
Serum alkaline phosphatase	135 IU/l
Serum aspartate aminotransferase	50 IU/l
C Reactive protein	2mg/l
Haemoglobin	14.6 g/dl
White cell count	5.6 x 10 ⁹ /L
INR	1.4

ABG (on air):

pH	7.258
----	-------

pO2	11.7 kPa
pCO2	3.4 kPa
Lactate	1.6 mmol/l
Base Excess	-8.4 mmol/l
Bicarbonate	11.9 mmol/l

ECG showed bradycardia with widened QRS complexes and giant inverted T waves.

After fluid resuscitation, what is the next single most important management step?

	Activated Charcoal
	Magnesium Sulphate
	Sodium Bicarbonate
	Haemodialysis
	N-Acetyl Cysteine infusion (NAC)

Dashboard

Overall score: **0%**

1 -

□ Question 21 of 156



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	N-Acetyl Cysteine infusion (NAC)

Dashboard
Overall score: 0% 1 -

□ Question 22 of 156

□ □

A 67-year-old woman presents to her GP with symptoms of dysuria and increased urinary frequency. She is otherwise systemically well with no signs of sepsis. Urine dip in the GP surgery shows blood, leukocytes, protein and nitrites. The patient's medical history is significant only for asthma for which she takes salbutamol and beclomethasone inhalers, hypertension for which she takes amlodipine 10mg daily and ramipril 5mg daily, and chronic kidney disease, stage 3.

Which of the following antibiotics is best avoided in the treatment of this patient's urine infection?

	Amoxicillin
	Augmentin (amoxicillin and clavulanic acid)
	Ciprofloxacin
	Nitrofurantoin
	Trimethoprim

Dashboard

Overall score: 0%

1 -

□ Question 22 of 156

□ □

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	Augmentin (amoxicillin and clavulanic acid)
	Ciprofloxacin
	Nitrofurantoin
	Trimethoprim

Dashboard

Overall score: **0%****1** -

Question 23 of 156

□ □

A 60 year old man with a known history of congestive cardiac failure and asthma is reviewed in a cardiology clinic. He is noted to have a blood pressure of 95/63mmHg and a heart rate of 98bpm. An ECG confirms sinus rhythm. He has previously developed symptoms of wheeze with beta blockade. He is commenced on ivabradine 5mg twice daily by his cardiologist.

Which of the following should the patient be warned of as a recognised side effect of ivabradine?

	Neutrophilia
	Hypotension
	Phosphenes
	Diaphoresis
	Renal failure

Dashboard

Overall score: 0%

1 -

□ Question 23 of 156

□ □

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	Neutrophilia
	Hypotension
	Phosphenes
	Diaphoresis
	Renal failure

Dashboard

Overall score: **0%****1** -

Question 24 of 156

□ □

A 27-year-old female with known HIV patient presents on the medical take with rigours, worsening cough and shortness of breath. She was diagnosed with pulmonary tuberculosis following a recent inpatient stay and discharged 1 month ago.

Lab results from her previous admission show a CD4 count of 120 and a viral load of 100,000 copies/mL. She was initially started on TB therapy and commenced HAART shortly before discharge.

On examination she has a temperature of 38.5°C, a heart rate of 92 beats per minute, a blood pressure of 118/76 mmHg, and a respiratory rate of 22/min. Auscultation of the chest reveals coarse crackles in the right mid and upper zone, there is also a dullness to percussion and quiet breath sounds at the right base. There is no lymphadenopathy and the remainder of the clinical examination is normal. A repeat chest x-ray today shows a worsening of right sided parenchymal consolidation and a new right sided pleural effusion.

What is the most appropriate management?

	Sputum drug sensitivity testing
	Drain the effusion and send fluid to microbiology for drug sensitivity testing
	Admit to hospital and organise directly observed therapy for her TB
	Add amphotericin
	Add prednisolone 30mg PO OD

Dashboard

Overall score: 0%

1 -

Question 24 of 156

□ □

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	Add prednisolone 30mg PO OD

Dashboard

Overall score: **0%**

1 -

Question 25 of 156

A 35 year old woman is diagnosed with iron deficiency anaemia due to menorrhagia. She is commenced on oral ferrous sulphate to replenish depleted iron stores.

Which of the following drugs may cause treatment failure?

<input type="checkbox"/>	Ascorbic acid
<input type="checkbox"/>	Calcium carbonate
<input type="checkbox"/>	Conjugated oestrogens
<input type="checkbox"/>	Folic acid
<input type="checkbox"/>	Mefenamic acid

Dashboard

Overall score: **0%**

1 -

Question 25 of 156

A 35 year old woman is diagnosed with iron deficiency anaemia due to menorrhagia. She is commenced on oral ferrous sulphate to replenish depleted iron stores.

Which of the following drugs may cause treatment failure?

<input type="checkbox"/>	Ascorbic acid
<input type="checkbox"/>	Calcium carbonate
<input type="checkbox"/>	Conjugated oestrogens
<input type="checkbox"/>	Folic acid
<input type="checkbox"/>	Mefenamic acid

Dashboard

Overall score: **0%**

1 -

Question 26 of 156

□ □

A 80-year-old man with a past medical history of gout, reflux and ischaemic heart disease is admitted to the emergency department with a atrial fibrillation with fast ventricular response. He is managed according to ALS protocol and is stabilised.

A full set of bloods are sent and are displayed below:

Hb	135 g/l
Platelets	$260 \times 10^9/l$
WBC	$6 \times 10^9/l$

Mg	0.34 $\mu\text{mol/l}$
Ca (adj)	2.1 u/l
PO4	0.8 u/l

This is discussed with the cardiology registrar, who advises correction of the magnesium.

What medication is the most likely cause of hypomagnesaemia in this case?

	Aspirin
	Omeprazole
	Ranitidine
	Colchicine
	Ramipril

Overall score: **0%**

1 -

Question 26 of 156

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What medication is the most likely cause of hypomagnesaemia in this case?

<input type="radio"/>	Aspirin
<input checked="" type="radio"/>	Omeprazole
<input type="radio"/>	Ranitidine
<input type="radio"/>	Colchicine
<input type="radio"/>	Ramipril

Dashboard

Overall score: **0%**

1 -

Question 27 of 156

A 30-year-old woman with rheumatoid arthritis has been diagnosed in the community with a prolonged urinary tract infection. For her rheumatoid arthritis she has been stable on azathioprine for nearly a year and besides paracetamol she takes no other regular medications.

The GP has requested a follow-up blood test which is shown below.

Baseline bloods were taken 2 months ago:

Hb	120 g/l
Platelets	$310 \times 10^9/l$
WBC	$4.5 \times 10^9/l$

Yesterday the bloods showed the following:

Hb	101 g/l
Platelets	$296 \times 10^9/l$
WBC	$1.9 \times 10^9/l$

Which of the following drugs is most likely responsible?

	Trimethoprim
	Nitrofurantoin
	Cephalexin
	Amoxicillin
	Co-amoxiclav

Dashboard

Overall score: **0%**

1 -

Question 27 of 156

A 30-year-old woman with rheumatoid arthritis has been diagnosed in the community with a prolonged urinary tract infection. For her rheumatoid arthritis she has been stable on azathioprine for nearly a year and besides paracetamol she takes no other regular medications.

The GP has requested a follow-up blood test which is shown below.

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	Trimethoprim
	Nitrofurantoin
	Cephalexin
	Amoxicillin
	Co-amoxiclav

Dashboard

Overall score: **0%**

1 -

Question 28 of 156

□ □

You review a 68-year-old patient in the diabetic clinic. He was diagnosed 28 years ago with type 2 diabetes and over this time has been through a number of antiglycemic agents including biguanides, sulfonylureas, thiazolidinediones and insulin. He is generally well but reports painless macroscopic haematuria and would like to be referred to a urologist as he has read about bladder cancer associated with one of his medications.

Which of the following antiglycemic agents can cause bladder cancer?

	Gliclazide
	Tolbutamide
	Pioglitazone
	Insulin detemir
	Sitagliptin

Dashboard

Overall score: 0%

1 -

Question 28 of 156

□ □

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Dashboard

Overall score: **0%**

1 -

☐ Question 29 of 156

A 19 year old man is brought into the Accident & Emergency department by his parents who are very concerned about his well being, and a medical opinion is sought. He arrived home from an evening with friends and was behaving bizzarely. When you talk to him, he tells you that he is feeling on top of the world and that he is an angel sent from god. He also describes seeing music as colours coming out of the radio earlier in the evening. He describes colours being more vivid and vibrant but denies any hallucinations. He has been unable to sleep for the past 24 hours

On examination, he is confused and disorientated but alert, skin colour is normal, central capillary refill time less than 2 seconds with moist mucous membranes. Normal eye movements, no peripheral focal neurology HR 115 sinus tachycardia (ECG normal) Blood tests (essentially normal) RR 16. Pupils dilated but responsive to light equally BP 174/98. When you are testing his eye movements he describes seeing trailing colours and when he closes his eyes he can see after-images that persist for a few seconds. He repeatedly asks you for glasses of water during the consultation and drinks them quite rapidly.

His mother says that he has no past history of medical problems and that his mental state has been normal until today and that he was well before he left the house 6 hours ago this evening. There is a family history of depression and he has recently left university due to not achieving the required grades

Towards the end of the consultation, he suddenly becomes very agitated and fearful, pointing at a wall believing that he is being chased by a monster, his family are unable to comfort him or lessen his agitation.

What is the the most appropriate treatment to give at this time?

	Haloperidol 5mg IM
	Lorazepam 1mg IM
	Lorazepam 1mg PO
	Olanzapine 10mg PO
	Lorazepam IV 1mg and cyproheptadine.

Dashboard

Overall score: **0%**

1 -

□ Question 29 of 156



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Dashboard

Overall score: **0%**

1 -

Question 30 of 156

□ □

A 40-year-old man presents with jaundice.

His past medical history includes cellulitis 6 weeks ago which was treated with flucloxacillin, asthma and psoriasis. He drinks 30 units of alcohol per week and is a smoker of 10 pack years.

On examination he is icteric and obese, with a soft, non-tender abdomen and no palpable organs. Digital rectal examination is unremarkable.

Hb	145 g/l
Platelets	206 * 10 ⁹ /l
Amylase	30 u/l
Bilirubin	79 µmol/l
ALP	300 u/l
AST	30 u/l

What is the most likely cause of his jaundice?

	Alcoholic cirrhosis
	Gilbert's syndrome
	Common bile duct gallstone
	Drug induced cholestasis
	Alcoholic hepatitis

Overall score: **0%**

1 -

Question 30 of 156

□ □

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	Alcoholic cirrhosis
	Gilbert's syndrome
	Common bile duct gallstone
	Drug induced cholestasis
	Alcoholic hepatitis

Overall score: **0%**

1 -

□ Question 31 of 156

□ □

A 22-year-old man presents to rheumatology clinic with chronic lower back pain and early morning stiffness. He has past medical history of asthma and is on regular steroid inhalers and suffers from multiple exacerbations annually. He is due to see a respiratory physician to help better manage his symptoms. Clinical examination shows demonstrate Schober's sign. Pelvic X-rays demonstrate sacroiliitis. A diagnosis of ankylosing spondylitis is made. The patient is concerned about using NSAIDs to control his symptoms; what factor may suggest that NSAID-sensitive asthma?

	Previous reaction to beta-blockers
	High frequency of exacerbations
	Presence of nasal polyps
	Adult-onset asthma
	Previous ITU admission

Dashboard

Overall score: 0%

1 -

□ Question 31 of 156

□ □

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	High frequency of exacerbations
	Presence of nasal polyps
	Adult-onset asthma
	Previous ITU admission

Dashboard

Overall score: **0%****1** -

Question 32 of 156

□ □

An 18-year-old girl presents to the emergency department following a paracetamol overdose. She reports taking 32 tablets with alcohol following an argument with her boyfriend. Despite treatment with N-acetyl cysteine and aggressive re-hydration with IV fluids, her condition deteriorates. Which of the following parameters, at 72 hours post-overdose, would warrant transfer to a specialist liver centre for consideration of acute transplantation?

	INR 3.3
	ALT 2456mmol/L
	Creatinine 198mmol/L
	Blood pH 7.26
	Bilirubin 79mmol/L

Dashboard

Overall score: 0%

1 -

Question 32 of 156

□ □

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Dashboard

Overall score: **0%**

1 -

Question 32 of 156



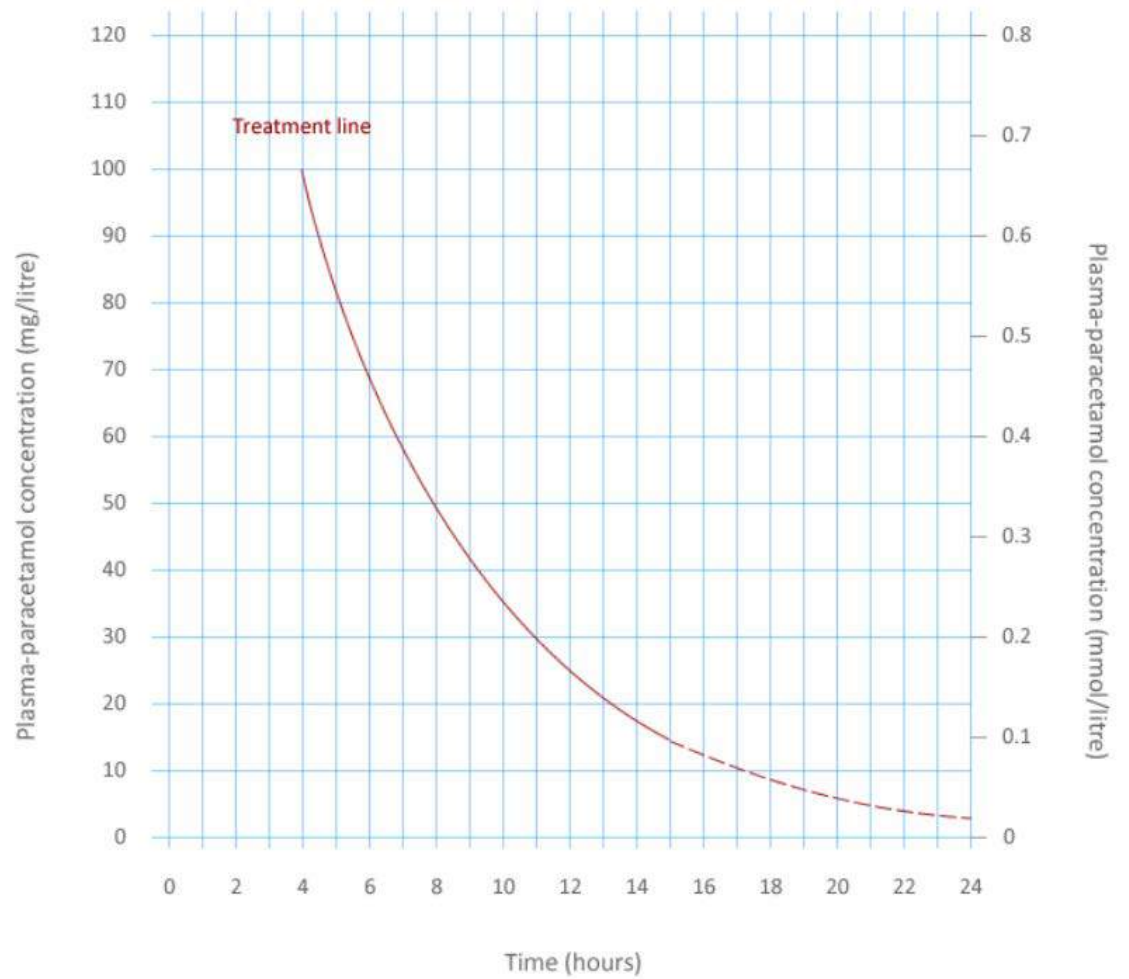
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	Creatinine 198mmol/L
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	Bilirubin 79mmol/L

Dashboard

Overall score: 0%

1 -



Question 33 of 156

□ □

A 44-year-old woman with a background of asthma who has required frequent use of oral corticosteroids is inquiring about vaccinations available to her. Which one of the following should be recommended?

	23-valent unconjugated pneumococcal polysaccharide vaccine and influenza vaccine
	13-valent conjugated pneumococcal polysaccharide vaccine only
	23-valent unconjugated pneumococcal polysaccharide vaccine only
	13-valent conjugated pneumococcal polysaccharide vaccine and influenza vaccine
	Influenza vaccine only

Dashboard

Overall score: **0%**

1 -

□ Question 33 of 156

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	13-valent conjugated pneumococcal polysaccharide vaccine and influenza vaccine
	Influenza vaccine only

Dashboard

Overall score: **0%**

1 -

□ Question 34 of 156



A 45 year old man is admitted from a local park. On arrival he is in respiratory distress with a ventilatory rate of 34 breaths per minute and a peripheral oxygen saturation of 89% on 15L/min oxygen via non-rebreathe mask. He is grey and sweaty with central cyanosis. Heart rate is 122bpm and blood pressure is 94/66mmHg. Examination of the chest discloses a normal cardiorespiratory examination and there is no clinical indication of heart failure. A chest xray shows no acute pathological lesion but background emphysematous changes and an ECG shows only sinus tachycardia with a corrected QT interval approaching the upper limit of normal with no ischaemic lesions.

An arterial blood gas taken on 15L/min oxygen shows:

pH	7.17	HCO ₃ ⁻	13.4	Glucose 6.9 mmol/l	MetHb	35%
pO ₂	10.9	Base excess	-5.8	Potassium 5.5 mmol/l	COHb	8%
pCO ₂	6.7	Lactate	4.1 mmol/l			

He is beginning to show signs of tiring and confusion and his GCS has fallen to 13/15 (E3V4M6) but he tells you he has been inhaling Liquid Gold (an alkyl nitrite).

Which of the following interventions is most appropriate in this patients immediate management?

	Continuous positive airways pressure ventilation (CPAP) pending transfer to a hyperbaric chamber
	Reduce inspired oxygen concentration and controlled oxygen therapy via Venturi valve
	75mg 1% methylthioninium chloride solution IV over 5 minutes
	300mg 3% sodium nitrite solution IV over 10 minutes
	50ml 8.4% sodium bicarbonate solution IV over 20 minutes

Overall score: **0%**

1 -

□ Question 34 of 156



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Overall score: **0%**

1 -

Question 35 of 156



A 4-year-old boy with infantile spasms commences treatment with the antiepileptic drug vigabatrin. What monitoring is required of patients commencing vigabatrin therapy?

<input type="checkbox"/>	Platelets
<input type="checkbox"/>	Liver function test
<input type="checkbox"/>	Visual field examination
<input type="checkbox"/>	Ophthalmoscopy for raised intracranial pressure
<input type="checkbox"/>	Spirometry

Dashboard

Overall score: **0%**

1 -

Question 35 of 156



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	Platelets
	Liver function test
	Visual field examination
	Ophthalmoscopy for raised intracranial pressure
	Spirometry

Dashboard

Overall score: **0%**

1 -

Question 36 of 156

□ □

A 45-year-old worker on demolition sites comes to the Emergency department for review. He has suffered increasing tiredness, lethargy, headache, and abdominal pains over the past 2 months. On examination he is hypertensive with a blood pressure of 155/90 mmHg, his pulse is 85 beats per minute and regular. He looks pale.

Investigations

Hb	97 g/l
MCV	78 fl
Platelets	$175 \times 10^9/l$
WBC	$6.2 \times 10^9/l$
Lead	5 $\mu\text{mol/l}$

Blood film reveals basophilic stippling

Which of the following is the most appropriate initial intervention?

	Activated charcoal
	Disodium EDTA
	DMSA
	Haemodialysis
	Vitamin C

Overall score: **0%**

1 -

Question 36 of 156

□ □

A 45-year-old worker on demolition sites comes to the Emergency department for review. He has suffered increasing tiredness, lethargy, headache, and abdominal pains over the past 2 months. On examination he is hypertensive with a blood pressure of 155/90 mmHg, his pulse is 85 beats per minute and regular. He looks pale.

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1 -

□ Question 36 of 156

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	Disodium EDTA
	DMSA
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	Vitamin C

Overall score: **0%**

1 -

Mitochondria

Cytosol

Glycine + succinyl-CoA

Sideroblastic
anemia

ALA synthase

δ -aminolevulinic acid

Lead poisoning

ALA dehydratase

Porphobilinogen

Porphobilinogen deaminase

AIP

Hydroxymethylbilane

Uroporphyrinogen III

Uroporphyrinogen
decarboxylase

PCT

Coproporphyrinogen III

Protoporphyrin

Fe^{2+}

Ferrochelatase

Lead

Heme

Hemoglobin

Globin chains

Question 37 of 156

□ □

A 67 year old type 2 diabetic visits you in endocrinology outpatients complaining of reduced mobility over the past 6 months. For the past 7 months, her blood glucose has been well controlled on the same regime of metformin and pioglitazone. In addition, she has a past medical history of two previous CABGs for ischaemic heart disease, hypertension and an active 35 pack year smoking history. She reports no orthopnoea or recent chest pain. On examination, her respiratory, cardiovascular and abdominal examinations are unremarkable. However, you note bilateral lower limb swelling to both knees, which she reports to have been of gradual onset over the past 6 months. You note no evidence of varicose veins or clinical signs of deep vein thrombosis. Urine dip is negative for glucose, leucocytes, nitrites and protein. A 12 lead ECG demonstrates normal sinus rhythm at 65/ minutes with normal voltage criteria. A recent echocardiogram 4 months ago demonstrate ejection fraction of 60% with no regional wall abnormalities. What is the most likely diagnosis?

	Silent myocardial infarctions
	Undiagnosed congestive cardiac failure resulting in fluid overload
	Diabetic nephropathy resulting in nephrotic syndrome
	Chronic venous insufficiency
	Pioglitazone resulting in fluid retention

Dashboard

Overall score: 0%

1 -

□ Question 37 of 156

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Dashboard

Overall score: **0%****1** -

Question 38 of 156



A 20-year-old girl with multiple sclerosis (MS) attends the emergency department following a seizure. She was diagnosed with MS at age 16 and has received different immunomodulatory regimes in the past, including azathioprine. She commenced natalizumab 2 years ago. This is her first seizure however once recovered, she tells you that she has noticed she has been increasingly clumsy over the last 6 months, she drops things easily. In addition, she has had several episodes where her speech has been slurred and people have commented that she sounds tired. On examination, you find that her tone is normal throughout, power in all muscles groups in both upper and lower limbs is normal. On cranial nerve examination, you identify a right homonymous superior quadrantanopia however she does have a full range of eye movements and no ptosis. She has an ataxic gait. Her speech is normal throughout the history.

She is concerned, what is the diagnosis?

	Progressive multifocal leukoencephalopathy
	Transient ischaemic attacks
	Progression of multiple sclerosis
	Newly diagnosed epilepsy
	myasthenia gravis

Dashboard

Overall score: 0%

1 -

Question 38 of 156



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	Progression of multiple sclerosis
	Newly diagnosed epilepsy
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Dashboard

Overall score: 0%

1 -

Question 39 of 156



A 29 year old male Polish male presents to the Emergency Department with 48 hours of severe 'burning and sharp' electrical pains in his arms and legs. He is well known to the department, having been treated for alcohol withdrawal a number of times in the past and is a known intravenous drug user. He reports no weakness, dysarthria or hallucinations. He reports drinking about 7 pints of beer in the past 24 hours, which he says is normal for him, and has used intravenous heroin daily for the past 2 weeks.

On examination, both upper and lower limbs are rigid and mildly bradykinetic. A bilateral resting tremor is noted in both hands. Reflexes and sensation are normal. Examination of cranial nerves and eye movements are unremarkable.

His initial blood tests return and are as follows:

Hb	16.3 g/dl
Platelets	$276 \times 10^9/l$
WBC	$5.5 \times 10^9/l$
Vitamin B12	202 ng/l
Folate	471 (>317 nmol/l)

Na ⁺	142 mmol/l
K ⁺	4.3 mmol/l
Urea	6.4 mmol/l
Creatinine	85 μ mol/l
CRP	7mg/l
HIV	negative

Which investigation is most likely to yield the underlying diagnosis?

--	--

	DAT scan
	Anti-GM1b antibodies
	Borrelia burgdorferi serology
	Urine porphobilinogen
	Serum heavy metals

Dashboard

Overall score: 0%

1 -

□ Question 39 of 156



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Dashboard

Overall score: **0%**

1 -

□ Question 40 of 156



A 45-year-old lady presents to the Emergency Department progressive shortness of breath for the last three days. It is worse on activity but is not associated with any cough or wheeze. She has a past medical history of asthma and HIV, for which takes antiretroviral medication regularly. At her last clinic appointment two weeks ago, she was found to have oral candida and so was given a 2 week course of nystatin and started on dapsone for prophylaxis of pneumocystis jirovecii pneumonia. She is a non-smoker.

On examination, her lips and nail beds have a bluish tinge and she is visibly breathless. Her respiratory rate is 26 per minute and on pulse oximetry her saturations are 91% on air both at rest and on exercise. Her temperature is 36.5°C and she has not felt feverish. On auscultation she has vesicular breath sounds with minimal wheeze and normal heart sounds with no murmurs. She has no ankle oedema and JVP is not raised. There is no evidence of oral candidiasis and no lymphadenopathy. Her calves are soft and non-tender.

A chest x-ray shows clear lung fields with no focal consolidation or lymphadenopathy. ECG is sinus rhythm at 90 beats per minute with normal complexes throughout.

Arterial blood gas on air:

pH	7.51
PaO ₂	13.7 kPa
PaCO ₂	3.34 kPa
HCO ₃ ⁻	22.1 mmol/l
BE	-3.3 mmol/l
sO ₂	97%
Hb	113 g/l
Na ⁺	143 mmol/l
K ⁺	3.7 mmol/l
Glu	5.2 mmol/l

Lac	1.9 mmol/l
-----	------------

What is the most likely diagnosis?

	Acute asthma
	Carbon monoxide poisoning
	Methemoglobinemia
	Pneumocystis jirovecii pneumonia
	Pulmonary embolus

Dashboard

Overall score: 0%

1 -

□ Question 40 of 156



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	Methemoglobinemia
	Pneumocystis jirovecii pneumonia
	Pulmonary embolus

Dashboard

Overall score: **0%**
1 -

□ Question 41 of 156



A 44-year-old man presents to the emergency department complaining of breathlessness. He reports that he was leaving a restaurant because he was starting to feel lightheaded, developed a headache and was breathless.

An ABG done on admission demonstrated carbon monoxide at 26%.

Three hours later he feels tired and weak, but his headache and lightheadedness have improved since admission. He has a past medical history of asthma which he reports to be well controlled, rarely needing his blue inhaler. He smokes 15-ciagarettes per day and has a 23 pack-year history. He works as a teacher in central London. On examination, he is receiving 15L of oxygen via a non-rebreather mask. His chest is clear on auscultation. Neurological examination is normal. An ECG demonstrates no ischaemic changes.

Observations:

Saturations	100%
Respiratory rate	16/min
Blood pressure	126/87mmHg
Heart rate	84/min
Temperature	36.8°C

What is the most appropriate management plan?

	Wean off oxygen guided by standard pulse oximetry saturation levels
	Prescribe IV mannitol
	Maintain high-flow oxygen until asymptomatic or carbon monoxide levels are <10%
	Refer urgently for hyperbaric oxygen treatment
	Arrange urgently for non-invasive ventilation

Dashboard

Overall score: **0%**

1 -

□ Question 41 of 156



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	Arrange urgently for non-invasive ventilation

Dashboard

Overall score: **0%**

1 -

Question 42 of 156

□ □

A 22-year-old male is 'blue-lighted' to the Emergency Department having been found collapsed at a party. On arrival, his GCS is 3/15 and he is immediately intubated and ventilated by the Emergency Physicians.

On examination he is afebrile. He is mildly bradycardic at 53bpm and his blood pressure is 109/69mmHg. His pupils measure 2mm bilaterally. IV access is obtained and 400 micrograms of naloxone are administered without effect. The on-call radiologist is contacted and a CT head scan is arranged.

One hour later the patient extubates himself without warning. He is referred to medicine as his GCS is still 13/15. His CT demonstrates no acute intracranial pathology. By the time you arrive in the Emergency Department his GCS has improved to 15/15 and he is demanding to go home.

Which drug is most likely to be implicated?

	Diazepam
	Methoxetamine
	Gamma-hydroxybutyric acid (GHB)
	Heroin
	Methamphetamine

Dashboard

Overall score: 0%

1 -

Question 42 of 156

□ □

A 22-year-old male is 'blue-lighted' to the Emergency Department having been found collapsed at a party. On arrival, his GCS is 3/15 and he is immediately intubated and ventilated by the Emergency Physicians.

On examination he is afebrile. He is mildly bradycardic at 53bpm and his blood pressure is 109/69mmHg. His pupils measure 2mm bilaterally. IV access is obtained and 400 micrograms of naloxone are administered without effect. The on-call radiologist is contacted and a CT head scan is arranged.

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Which drug is most likely to be implicated?

	Diazepam
	Methoxetamine
	Gamma-hydroxybutyric acid (GHB)
	Heroin
	Methamphetamine

Dashboard

Overall score: **0%**

1 -

Question 43 of 156

□ □

A 35-year-old woman who was diagnosed with hereditary angioedema is about to undergo an elective meniscal repair for her left knee. She has been well otherwise with no recent changes to her health or medications. Which is the drug of choice for prophylaxis for her hereditary angioedema prior to her procedure?

	Prednisolone
	Hydrocortisone
	Conestat alfa
	Tranexamic acid
	Icatibant

Dashboard

Overall score: 0%

1 -

Question 43 of 156

□ □

A 35-year-old woman who was diagnosed with hereditary angioedema is about to undergo an elective meniscal repair for her left knee. She has been well otherwise with no recent changes to her health or medications. Which is the drug of choice for prophylaxis for her hereditary angioedema prior to her procedure?

	Prednisolone
	Hydrocortisone
	Conestat alfa
	Tranexamic acid
	Icatibant

Dashboard

Overall score: **0%**

1 -

□ Question 44 of 156

□ □

A 17-year-old woman comes to the Emergency department some 45 minutes after taking 60x200mg iron sulphate tablets. She did this after a row with her mother who is pregnant with her 4th child and did not intend to kill herself. She is complaining of nausea and abdominal pain and has vomited once in the ambulance. On examination her blood pressure is 122/82 mmHg, her pulse is 80/min and regular. Heart sounds are normal, her chest is clear and she is tender in the epigastrium. Radiography reveals a large number of radio-opaque tablets within the stomach Which of the following is the most appropriate initial intervention for GI decontamination?

	Large bore gastric lavage
	Nasogastric magnesium sulphate
	Whole bowel irrigation
	Oral activated charcoal
	Oral ipecac

Dashboard

Overall score: 0%

1 -

□ Question 44 of 156

□ □

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	Large bore gastric lavage
	Nasogastric magnesium sulphate
	Whole bowel irrigation
	Oral activated charcoal
	Oral ipecac

Dashboard

Overall score: **0%****1** -

□ Question 45 of 156



A 28 year old woman was admitted to the Emergency Department drowsy and unwell after a suspected suicide attempt at home. The patient was under the care of the community psychiatry and had been receiving treatment for schizoaffective disorder. There was no other known past medical history. The paramedics bringing the patient to hospital also had brought the medications they found in the patient's home including Quetiapine, Levomepromazien, Zopiclone and Oxazepam. The paramedics reported that they had not seen evidence of empty medication packets or blister packs at the patient's home.

Initial assessment of the patient was unremarkable except for reduced consciousness level. Basic observations at presentation are listed below.

- Blood pressure: 150/79 mmHg
- Heart rate: 89 bpm
- Respiratory rate: 20 / min
- O2 saturations (15 L O2): 100 %
- Glasgow coma score: M5 V3 E2
- Blood glucose: 7.0 mmol / L
- Temperature: 36.8°C

Results from an arterial blood sample (15 L O2) were as follows.

pH	7.19
PaCO2	3.3 kPa
PaO2	21.2 kPa
Bicarbonate	8.9 mmol / L (reference 20.0-26.0)

Sodium	142 mmol / L
Potassium	3.6 mmol / L
Calcium	2.13 mmol / L (reference 2.20-2.60)
Chloride	110 mmol / L (reference 99-108)

Urea	5.2 mmol / L
Creatinine	110 micromol / L
Lactate	26 mmol / L
Plasma osmolality	380 mmol / Kg (reference 280-295)
Haemoglobin	12.0 g / dL

Based on the above blood results, what is the most likely cause of the patient's reduced consciousness level?

	Ethanol intoxication
	Benzodiazepene overdose
	Ethylene glycol intoxication
	Quetiapine overdose
	Chronic renal failure

Dashboard

Overall score: 0%

1 -

□ Question 45 of 156



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Creatinine	110 micromol / L
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Plasma osmolality	380 mmol / Kg (reference 280-295)
Haemoglobin	12.0 g / dL

Based on the above blood results, what is the most likely cause of the patient's reduced consciousness level?

	Ethanol intoxication
	Benzodiazepene overdose
	Ethylene glycol intoxication
	Quetiapine overdose
	Chronic renal failure

Dashboard

Overall score: 0%

1 -

□ Question 46 of 156

□ □

A 17-year-old woman with a history of epilepsy and deliberate self-harm is brought into the emergency department with a Glasgow coma score of 13 (E3 V4 M6) and respiratory rate of 8/min.

On examination, her pulse is 56/min and regular, blood pressure 110/60 mmHg and her chest is clear. She has no signs of injury but an empty packet of diazepam was found in her handbag. Whilst the patient is breathing room air a nurse in the emergency department has taken an arterial blood gas shown below.

pH	7.39
pO ₂	10.1 kPa
pCO ₂	5.6 kPa
BE	0.8 mEq/l

What is the best initial management?

	Flumazenil 200mcg infused IV over 15 minutes
	Flumazenil 200mcg bolus IV over 15 seconds
	Naloxone 400mcg IM injection
	Urgent intubation with anaesthetic support
	Supportive care only

Dashboard

Overall score: 0%

1 -

□ Question 46 of 156

□ □

A 17-year-old woman with a history of epilepsy and deliberate self-harm is brought into the emergency department with a Glasgow coma score of 13 (E3 V4 M6) and respiratory rate of 8/min.

On examination, her pulse is 56/min and regular, blood pressure 110/60 mmHg and her chest is clear. She has no signs of injury but an empty packet of diazepam was found in her handbag. Whilst the patient is breathing room air a nurse in the emergency department has taken an arterial blood gas shown below.

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	Flumazenil 200mcg bolus IV over 15 seconds
	Naloxone 400mcg IM injection
	Urgent intubation with anaesthetic support
	Supportive care only

Dashboard

Overall score: 0%

1 -

□ Question 47 of 156



A 70 year old man is admitted to hospital with chest pain associated with nausea and vomiting. There was no recent history of shortness of breath or wheeze. ECG demonstrated inferolateral ST depression and troponin was significantly elevated at 12 hours after symptom onset.

His past medical history included chronic obstructive pulmonary disease, hypertension and a previous MI 3 years previously. The patient reported two exacerbations of his COPD within the last 18 months, neither of which required hospital admission. He had never required intubation or non-invasive ventilation due to his COPD.

Regular medications included bendroflumethiazide 2.5 mg OD, inhaled tiotropium 18 microg OD and inhaled salbutamol 100 microg PRN. There were no known drug allergies. The patient was a retired engineer, an ex-smoker and lived independently with his wife.

The initial impression was of non-ST elevation myocardial infarction and treatment was initiated with aspirin, clopidogrel, fondaparinux, ramipril and atorvastatin. The patient subsequently mobilised pain-free on the ward and was discharged home with plan for outpatient stress echocardiogram.

Recent pulmonary function tests are given in the table below.

Forced vital capacity	105 % predicted
Forced expiratory volume (1s)	67 % predicted
FVC / FEV1	64 % predicted

Transthoracic echocardiogram: no valvular abnormality; mild-moderate systolic impairment of lateral left ventricle; normal right ventricular function

What is the most appropriate plan for beta-blockade therapy for this patient?

	Low dose bisoprolol with slow up-titration of dose

	Low dose carvedilol with slow up-titration of dose
	Low dose bisoprolol
	Low dose carvedilol
	Beta-blockade therapy inappropriate

Dashboard

Overall score: 0%

1 -

□ Question 47 of 156



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	Low dose carvedilol with slow up-titration of dose
	Low dose bisoprolol
	Low dose carvedilol
	Beta-blockade therapy inappropriate

Dashboard

Overall score: **0%**
1 -

Question 48 of 156



A 27-year-old man was seen in the dermatology clinic with an itchy, vesicular rash over buttocks and proximal forearms. He was otherwise well.

A subsequent skin biopsy and direct immunofluorescence demonstrate granular IgA at the dermal-epidermal junction. Given the most likely diagnosis, he was started on dapsone and given specific diary advice.

Six weeks later he complains of worsening fatigue.

What is the most important investigation?

<input type="checkbox"/>	Full blood count
<input type="checkbox"/>	Echocardiogram
<input type="checkbox"/>	ECG
<input type="checkbox"/>	Urine protein:creatinine ratio
<input type="checkbox"/>	Creatine kinase

Dashboard

Overall score: 0%

1 -

Question 48 of 156

□ □

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Six weeks later he complains of worsening fatigue.

What is the most important investigation?

	Full blood count
	Echocardiogram
	ECG
	Urine protein:creatinine ratio
	Creatine kinase

Dashboard

Overall score: 0%

1 -

Question 48 of 156

A 27-year-old man was seen in the dermatology clinic with an itchy, vesicular rash on his arms and legs. He was otherwise well.

A subsequent skin biopsy and direct immunofluorescence demonstrated IgA deposits. Given the most likely diagnosis, he was started on dapsone and given 100mg of prednisolone.

Six weeks later he complains of worsening fatigue.

What is the most important investigation?

	Full blood count
	Echocardiogram
	ECG
	Urine protein:creatinine ratio
	Creatine kinase



Dashboard

Overall score: 0%

1 -

Question 49 of 156

A patient has been admitted with left lower limb deep vein thrombosis. He was diagnosed by the FY1 who has efficiently started him on warfarin.

Two days after initiation you are asked to see this gentleman who has developed skin necrosis over his right thigh.

What is the most likely cause of his skin necrosis?

<input type="checkbox"/>	Antiphospholipid syndrome
<input type="checkbox"/>	Heparin induced thrombocytopenia (HIT) type II
<input type="checkbox"/>	Excessive serum Antithrombin III
<input type="checkbox"/>	Acquired haemophilia
<input type="checkbox"/>	Protein C deficiency

Dashboard

Overall score: 0%

1 -

Question 49 of 156

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<input checked="" type="checkbox"/>	Protein C deficiency

Dashboard

Overall score: **0%**

1 -

Question 50 of 156

□ □

A 49-year-old woman comes to the Emergency department suffering from nausea and lethargy which has increased over the past few days. She has undergone a renal transplant for end stage renal failure due to chronic reflux nephropathy some 3 months ago. You understand her GP prescribed an antibiotic for a respiratory tract infection without checking for potential interactions with her ciclosporin based immunosuppressive regime. Creatinine has increased significantly, and ciclosporin is above the upper limit of the recommended range.

Investigations:

Na ⁺	142 mmol/l
K ⁺	5.1 mmol/l
Urea	8.2 mmol/l
Creatinine (3 months ago)	161 µmol/l
Creatinine (today)	225 µmol/l

Which of the following antibiotics is she most likely to have been prescribed?

	Amoxicillin
	Cephalexin
	Clarithromycin
	Doxycycline
	Levofloxacin

Overall score: **0%**

1 -

□ Question 50 of 156

□ □

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	Amoxicillin
	Cephalexin
	Clarithromycin
	Doxycycline
	Levofloxacin

[Dashboard](#)

Overall score: **0%**

1 -

□ Question 51 of 156



A 28-year-old lady is brought in by her mother having taken an overdose of an unknown medication. She has recently broken up with her boyfriend and has been fired from her job for turning up late to work persistently. She was found in her room by her mother with a small bottle of vodka which was empty and some burnt medication packaging. She has no history of mental health disease, although did self-harm (arm cutting) twice whilst a teenager. She has no medical history other than being treated for malaria during a recent trip to west Africa. The patient is tearful, regrets the overdose and is currently complaining of nausea, epigastric discomfort, slightly blurred vision and a ringing in her ears.

On examination, her heart rate is 115 beats/min, her blood pressure 98/48 mmHg and she appears flushed. Her respiratory rate is 18 breaths per minute and her oxygen saturations 98% breathing room air. Her Glasgow coma score is 15/15 and her pupils are equal and reactive. Her blood results are as follows.

Na ⁺	135 mmol/l
K ⁺	4.3 mmol/l
Urea	5.1 mmol/l
Creatinine	86 µmol/l
Bilirubin	18 µmol/l
ALP	65 u/l
ALT	56 u/l

What is the most likely toxin?

	Quinine overdose
	Ibuprofen overdose
	Alcohol intoxication
	Paracetamol overdose

Dashboard

Overall score: **0%**

1 -

□ Question 51 of 156



A 28-year-old lady is brought in by her mother having taken an overdose of an unknown medication. She has recently broken up with her boyfriend and has been fired from her job for turning up late to work persistently. She was found in her room by her mother with a small bottle of vodka which was empty and some burnt medication packaging. She has no history of mental health disease, although did self-harm (arm cutting) twice whilst a teenager. She has no medical history other than being treated for malaria during a recent trip to west Africa. The patient is tearful, regrets the overdose and is currently complaining of nausea, epigastric discomfort, slightly blurred vision and a ringing in her ears.

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Creatinine	86 µmol/l
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ALP	65 u/l
ALT	56 u/l

What is the most likely toxin?

	Quinine overdose
	Ibuprofen overdose
	Alcohol intoxication
	Paracetamol overdose

Dashboard

Overall score: **0%**

1 -

□ Question 52 of 156



A 24-year-old man with a history of depression and self-harm is brought to the emergency department by a friend 2 hours after an impulsive overdose of ferrous sulphate. He weighs 65kg and has ingested 65 x 200mg ferrous sulphate tablets. This is equivalent to 4225mg of elemental iron (65mg/kg).

On assessment, he denies any abdominal pain, diarrhoea or vomiting.

Observations are as follows:

- Temperature 36.5
- Respiratory rate 18/min
- Saturations 98% on air
- Heart rate 82bpm
- Blood pressure 136/74 mmHg

Venous blood results show:

Hb	133 g/l	Na ⁺	139 mmol/l	Bilirubin	8 µmol/l
Platelets	287 * 10 ⁹ /l	K ⁺	4.1 mmol/l	ALP	89 u/l
WBC	8.3 * 10 ⁹ /l	Urea	3.4 mmol/l	ALT	34 u/l
Neuts	4.2 * 10 ⁹ /l	Creatinine	72 µmol/l	Albumin	40 g/l
Lymphs	1.3 * 10 ⁹ /l			Serum iron	70 umol/l
Eosin	0.2 * 10 ⁹ /l			pH	7.40

Abdominal x-ray demonstrates the presence of iron in the stomach.

What is the appropriate initial medical management

	Whole bowel irrigation
	Activated charcoal

	Emergency endoscopy for removal of iron from the stomach
	Observe and repeat iron levels 4-6 hours after ingestion
	Administer desferrioxamine

Dashboard

Overall score: 0%

1 -

Question 52 of 156



A 24-year-old man with a history of depression and self-harm is brought to the emergency department by a friend 2 hours after an impulsive overdose of ferrous sulphate. He weighs 65kg and has ingested 65 x 200mg ferrous sulphate tablets. This is equivalent to 4225mg of elemental iron (65mg/kg).

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Observations are as follows:

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Neuts	4.2 * 10 ⁹ /l	Creatinine	72 µmol/l	Albumin	40 g/l
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Eosin	0.2 * 10 ⁹ /l			pH	7.40

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What is the appropriate initial medical management

	Whole bowel irrigation
	Activated charcoal

	Emergency endoscopy for removal of iron from the stomach
	Observe and repeat iron levels 4-6 hours after ingestion
	Administer desferrioxamine

Dashboard

Overall score: **0%**

1 -

Question 53 of 156



A 68-year-old lady is reviewed in the cardiology outpatient clinic following a recent admission for a non-ST-elevation myocardial infarction (NSTEMI). An echocardiogram performed during her inpatient stay showed mild-moderate LV systolic dysfunction with an ejection fraction of 40%.

Since discharge, she has been feeling well and has experienced no further episodes of chest pain. She reports only mild breathlessness on climbing two flights of stairs but draws your attention to an itchy rash on her lower legs. On examination, there are tense blisters covering her lower limbs bilaterally with minimal underlying oedema.

Which of her medications is most likely to be implicated?

	Spironolactone
	Clopidogrel
	Bisoprolol
	Furosemide
	Ramipril

Dashboard

Overall score: 0%

1 -

Question 53 of 156

A 68-year-old lady is reviewed in the cardiology outpatient clinic following a recent admission for a non-ST-elevation myocardial infarction (NSTEMI). An echocardiogram performed during her inpatient stay showed mild-moderate LV systolic dysfunction with an ejection fraction of 40%.

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	Clopidogrel
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Dashboard

Overall score: 0%

1 -

Question 53 of 156

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<input type="radio"/>	Spironolactone
<input type="radio"/>	Clopidogrel
<input type="radio"/>	Bisoprolol
<input checked="" type="radio"/>	Furosemide
<input type="radio"/>	Ramipril

Dashboard

Overall score: **0%**

1 -

Question 54 of 156

□ □

A 54-year-old female presented to the dermatology clinic with a history of worsening itchy rash. She has a history of psoriasis which had been quite well controlled but had worsened significantly in the last week. On examination, there are multiple well-demarcated oval, red/pink elevated lesions with overlying silvery scales over her elbows, knees, legs and scalp. She revealed that her GP had started her on a new tablet 2 weeks ago. Which of the following drugs is likely to have resulted in the above presentation?

	Citalopram
	Lithium
	Omeprazole
	Ranitidine
	Cimetidine

Dashboard

Overall score: 0%

1 -

Question 54 of 156

A 54-year-old female presented to the dermatology clinic with a history of worsening itchy rash. She has a history of psoriasis which had been quite well controlled but had worsened significantly in the last week. On examination, there are multiple well-demarcated oval, red/pink elevated lesions with overlying silvery scales over her elbows, knees, legs and scalp. She revealed that her GP had started her on a new tablet 2 weeks ago. Which of the following drugs is likely to have resulted in the above presentation?

	Citalopram
	Lithium
	Omeprazole
	Ranitidine
	Cimetidine

Dashboard

Overall score: **0%**

1 -

Question 55 of 156



A 21-year-old woman presents to the emergency department after her flatmate found her drowsy in her bedroom. She had been incontinent of urine.

On examination the patient is obtunded with a Glasgow Coma Score of 7 (E1V2M4). The pupils are 7mm bilaterally and sluggishly reactive to light. The heart rate is 133bpm and the blood pressure is 99/65mmHg.

A 12-lead ECG reveals sinus tachycardia with a QT interval of 510ms. The QRS duration is 115ms.

What is the most likely cause for this patient's presentation?

	Amyl nitrate toxicity
	Gamma hydroxybutyric acid toxicity
	Toluene solvent toxicity
	Tricyclic antidepressant toxicity
	Heroin toxicity

Dashboard

Overall score: 0%
1 -

Question 55 of 156

□ □

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	Gamma hydroxybutyric acid toxicity
	Toluene solvent toxicity
	Tricyclic antidepressant toxicity
	Heroin toxicity

Dashboard

Overall score: **0%**

1 -

Question 56 of 156



A 30-year-old female, who was diagnosed two months earlier with Graves disease and was started on carbimazole 40 mg per day , presented complaining of sore throat.

Investigations reveal:

Haemoglobin	11.5 g/dl
MCV	80 fl
White cell count	$4.2 \times 10^9/l$
Neutrophils	$2.0 \times 10^9/l$
Lymphocytes	$2.3 \times 10^9/l$
Basophils	$0.08 \times 10^9/l$
Eosinophils	$0.1 \times 10^9/l$
Platelets	$170 \times 10^9/l$

What is the most appropriate treatment for this patient?

	Discontinue carbimazole and give propylthiouracil
	Discontinue carbimazole and give radioactive iodine
	Discontinue carbimazole and give antibiotics
	Reduce the dose of carbimazole
	Continue carbimazole

Overall score: **0%**

1 -

Question 56 of 156

□ □

A 30-year-old female, who was diagnosed two months earlier with Graves disease and was started on carbimazole 40 mg per day , presented complaining of sore throat.

Investigations reveal:

Haemoglobin	11.5 g/dl
MCV	80 fl
White cell count	$4.2 \times 10^9/l$
Neutrophils	$2.0 \times 10^9/l$
Lymphocytes	$2.3 \times 10^9/l$
Basophils	$0.08 \times 10^9/l$
Eosinophils	$0.1 \times 10^9/l$
Platelets	$170 \times 10^9/l$

What is the most appropriate treatment for this patient?

	Discontinue carbimazole and give propylthiouracil
	Discontinue carbimazole and give radioactive iodine
	Discontinue carbimazole and give antibiotics
	Reduce the dose of carbimazole
	Continue carbimazole

Overall score: **0%**

1 -

Question 57 of 156



A 27 year old man is brought to the Emergency Department following a suspected deliberate overdose. On arrival he is drowsy with a GCS of 13/15 (E3V4M6) and confused. His airway is currently patent. The respiratory rate is 30 breaths per minute although oxygen saturations are 98% on 2L/min oxygen. The chest is clear to auscultation. Heart rate is 108bpm and blood pressure is 96/48mmHg. The ECG shows sinus tachycardia only. He complains of severe abdominal pain and is groaning on examination. There is significant tenderness in the right upper quadrant. Bowel sounds are hyperactive. Neurological examination is difficult but discloses downgoing plantars and reactive, mid-size pupils.

Blood tests show:

Haemoglobin	112g/L	Sodium	131mmol/L	Glucose	17.8mmol
MCV	96fL	Potassium	Haemolysed	Lactate	5.3mmol/L
White cells	15.7x10 ⁹ /L	Urea	15.6mmol/L	pH	7.14
Neutrophils	13.7x10 ⁹ /L	Creatinine	207mol/L	pCO ₂	2.9kPa
Platelets	278x10 ⁹ /L	ALP	234U/L	pO ₂	19.2kPa
INR	1.2	ALT	2453U/L	Bicarbonate	9.4mmol/L
PT	14secs	AST	3109U/L	Base excess	-15.4mEq/L
APTT	49.2secs	Bilirubin	36mol/L	Anion gap	30.8

The laboratory comments there is significant haemolysis of the samples.

He has a massive vomit during assessment of black liquid and fresh blood.

Which of the following drugs is this patient most likely to have overdosed upon?

	Aspirin
	Ferrous sulphate

	Ibuprofen
	Paracetamol
	Venlafaxine

Dashboard

Overall score: **0%**
1 -

□ Question 57 of 156



A 27 year old man is brought to the Emergency Department following a suspected deliberate overdose. On arrival he is drowsy with a GCS of 13/15 (E3V4M6) and confused. His airway is currently patent. The respiratory rate is 30 breaths per minute although oxygen saturations are 98% on 2L/min oxygen. The chest is clear to auscultation. Heart rate is 108bpm and blood pressure is 96/48mmHg. The ECG shows sinus tachycardia only. He complains of severe abdominal pain and is groaning on examination. There is significant tenderness in the right upper quadrant. Bowel sounds are hyperactive. Neurological examination is difficult but discloses downgoing plantars and reactive, mid-size pupils.

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Which of the following drugs is this patient most likely to have overdosed upon?

Aspirin

Ferrous sulphate

	Ibuprofen
	Paracetamol
	Venlafaxine

Dashboard

Overall score: **0%**
1 -

□ Question 58 of 156

□ □

A 51-year-old patient with a history of schizophrenia presents after being found on the floor of his sheltered accommodation home surrounded by many packets of medications. There is no collateral history. On examination, the patient is only verbally responsive to pain. There is evidence of vomitus around the oral cavity. You note that he is generally tremulous. Observations show heart rate 110/min, blood pressure 101/61 mmHg.

On the 12 lead ECG the P waves are present followed by QRS complexes. PR interval 0.12 seconds, QRS 0.12 seconds, corrected QT 0.48 seconds. What is the most likely causative agent?

	Citalopram
	Chlorpromazine
	Diazepam
	Digoxin
	Cocaine

Dashboard

Overall score: 0%

1 -

□ Question 58 of 156

□ □

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	Citalopram
	Chlorpromazine
	Diazepam
	Digoxin
	Cocaine

Dashboard

Overall score: **0%****1** -

Question 59 of 156

You are called to the emergency department to review a 33-year-old man. He is an Estonian national and works on a farm. His spoken English is poor but he tells you he feels unwell. He is being treated in a side-room because of loose stools.

On examination he is drooling slightly and has watery eyes. His pupils are equal in size but miotic. His blood pressure is 102/58 mmHg and an ECG shows sinus bradycardia.

How should this patient be managed? :

<input type="checkbox"/>	Amiodarone
<input type="checkbox"/>	Pyridostigmine
<input type="checkbox"/>	Glucagon
<input type="checkbox"/>	Haemodialysis
<input type="checkbox"/>	Atropine

Dashboard

Overall score: 0%

1 -

Question 59 of 156

□ □

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How should this patient be managed? :

	Amiodarone
	Pyridostigmine
	Glucagon
	Haemodialysis
	Atropine

Dashboard

Overall score: **0%**

1 -

□ Question 60 of 156

□ □

A 43 year old woman is admitted to hospital with acute pyelonephritis. She is adequately resuscitated and stabilised on admission. Urine cultures subsequently grow a fully sensitive *Escherichia coli*. Her medical history is remarkable for asthma since childhood, well controlled on inhaled salbutamol and beclomethasone and myasthenia gravis diagnosed six years previously with an uncomplicated thymectomy three years ago. Her disease is currently controlled on pyridostigmine 50mg three times a day.

Which of the following antibiotics is contra-indicated in the treatment of this patient's pyelonephritis?

	Amoxicillin
	Ciprofloxacin
	Doxycycline
	Gentamicin
	Nitrofurantoin

Dashboard

Overall score: 0%

1 -

□ Question 60 of 156

□ □

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	Ciprofloxacin
	Doxycycline
	Gentamicin
	Nitrofurantoin

Dashboard

Overall score: **0%****1** -

Question 61 of 156

□ □

A 75-year-old lady with memory problems attended a specialist memory clinic with her daughter. Her daughter was very concerned and mentioned that her mother had been much more forgetful over the past year. She had left the gas cooker on and occasionally got lost when she walked to the shops. On one occasion she had been found by a neighbour wandering the streets in her dressing gown.

This lady had a family history of Alzheimers disease with both her mother and sister being diagnosed with the condition in their seventies.

On examination she had a Mini Mental State Examination Score of 19/30. Otherwise a full physical examination was unremarkable.

Magnetic resonance of imaging of the brain showed marked atrophy of the medial temporal lobes bilaterally with no evidence of a reversible cause of dementia.

You suspect that this lady has Alzheimers disease and wish to start her on donepezil.

Before starting her on this medication which of the following should you arrange?

<input type="checkbox"/>	Electrocardiogram (ECG)
<input type="checkbox"/>	Chest X-ray
<input type="checkbox"/>	Echocardiogram
<input type="checkbox"/>	Lung function tests
<input type="checkbox"/>	Ophthalmology review

Dashboard

Overall score: 0%

Question 61 of 156

□ □

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	Chest X-ray
	Echocardiogram
	Lung function tests
	Ophthalmology review

Dashboard

Overall score: **0%**

□ Question 62 of 156

□ □

A 50-year-old obese gentleman presented to the emergency department with sweating, pallor, shortness of breath and central chest pain. He was diagnosed with a STEMI and underwent primary PCI. An ECHO after the event showed an EF of 35%. Following work up for his coronary artery disease he was diagnosed with type 2 diabetes. He was commenced on iv insulin which controlled his blood glucose in the interim.

Investigations

Creatinine	122umol/L
Urea	8.2mmol/l
Na+	140 mmol/l
K+	3.6 mmol/l
eGFR	62 ml/min
HbA1C	9.4%
HCO ₃	22
Aspartate transaminase	52 U/L
Alkaline phosphatase	110 U/L
Gamma-glutamyl transferase	39 U/L

In the long term treatment of his diabetes which hypoglycaemic agent is best avoided?

	Metformin
	Pioglitazone
	Gliclazide
	Acarbose

	Insulin glargine
--	------------------

Dashboard

Overall score: **0%**

1 -

□ Question 62 of 156



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	Gliclazide
	Acarbose

	Insulin glargine
--	------------------

Dashboard

Overall score: **0%**
1 -

Question 63 of 156

□ □

A 50 year-old man presents to the medical assessment unit with a two day history of nausea and vomiting. His notes are currently not available to you, and the patient is unable to recall his medical problems. He is currently an inpatient at the local psychiatry facility.

On examination, he appears drowsy with an ataxic gait. Neurological examination reveals normal tone with generalised reduced power. He also has a coarse tremor when his hands are outstretched. Cardiorespiratory examination reveals is unremarkable.

ECG- sinus arrhythmia at 90 beats per minute. T wave inversion in leads V1-V3.

Observations

Blood pressure- 150/90 mmHg

Heart rate- 90 beats per minute

Respiratory rate- 16 breaths per minute

Oxygen saturations- 99% on room air

Temperature- 37.3°C

What is the most likely cause of his symptoms?

	Lithium toxicity
	Alcohol withdrawal
	Serotonin syndrome
	Neuroleptic malignant syndrome
	Tricyclic antidepressant overdose

Overall score: **0%**

1 -

Question 63 of 156

□ □

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Overall score: **0%**

1 -

Question 64 of 156

□ □

A 69-year-old man was investigated for dyspepsia and diagnosed with a duodenal ulcer with no indication of malignancy. He recently had a dental infection which required a procedure and metronidazole. There was also confirmation of the presence of *Helicobacter pylori*.

Which regimen should be used in this patient?

	Proton pump inhibitor, amoxicillin, and metronidazole for 1 week
	Proton pump inhibitor, amoxicillin and clarithromycin for 2 weeks
	Proton pump inhibitor, amoxicillin and clarithromycin for 1 week
	Proton pump inhibitor, amoxicillin, and metronidazole for 2 week
	Proton pump inhibitor, clarithromycin and metronidazole for 1 week

Dashboard

Overall score: 0%

1 -

Question 64 of 156

□ □

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	Proton pump inhibitor, clarithromycin and metronidazole for 1 week

Dashboard

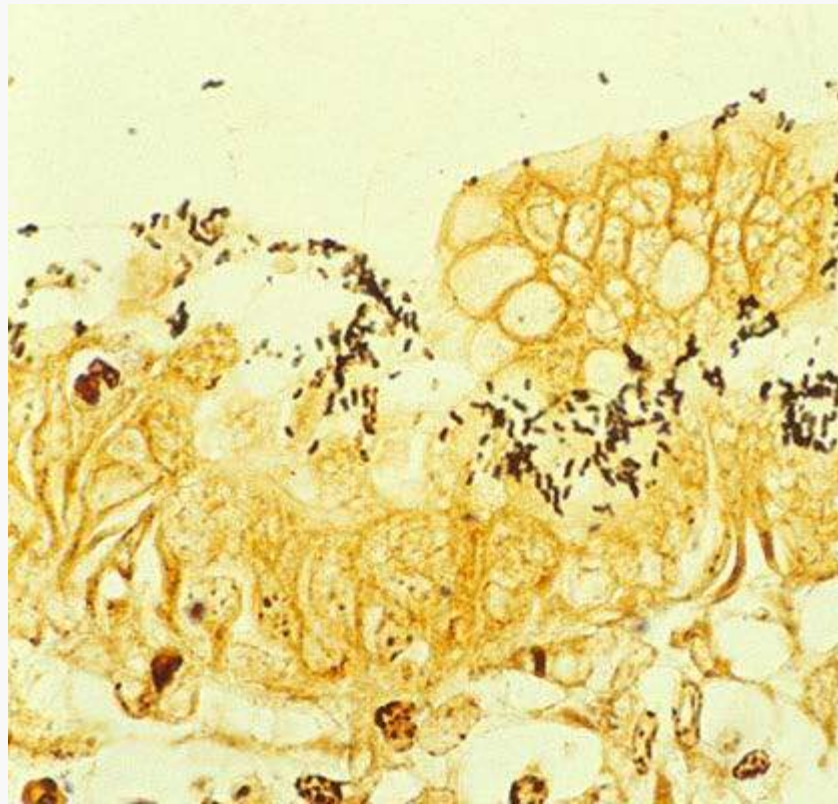
Overall score: **0%**

1 -

Question 64 of 156

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<input checked="" type="radio"/>	Proton pump inhibitor, amoxicillin and clarithro
<input type="radio"/>	Proton pump inhibitor, amoxicillin, and metronidazole for 2 week
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Dashboard

Overall score: **0%**

1 -

□ Question 65 of 156



A 43-year-old gentleman is admitted to the Emergency Department with a 2-week history of worsening drowsiness and confusion. His wife states that he had initially complained of increased tiredness and had started taking to his bed immediately after arriving home from work. One week ago he stopped going to work altogether and his wife reports that he has been sleeping for most of the day since then. This morning she had difficulty waking him, and when she did manage to rouse him he seemed confused with apparent slurring of his speech.

His past medical history is remarkable for epilepsy and bipolar disorder.

On examination, he is responsive only to pain. His vital signs are within normal limits and examination of the chest is unremarkable. His abdomen is soft, with no obvious tenderness and no organomegaly. Bowel sounds are present.

A set of blood tests are taken:

Hb	152 g/l	Na ⁺	139 mmol/l	Bilirubin	18 µmol/l
Platelets	278 * 10 ⁹ /l	K ⁺	4.3 mmol/l	ALP	117 u/l
WBC	8.1 * 10 ⁹ /l	Urea	5.2 mmol/l	ALT	19 u/l
Neuts	5.4 * 10 ⁹ /l	Creatinine	93 µmol/l	γGT	48 u/l
Lymphs	1.8 * 10 ⁹ /l			Albumin	41 g/l
Eosin	0.2 * 10 ⁹ /l			Ammonia	197 µmol/l

His wife later remarks that his medications have recently been altered by his GP. Which of the following is most likely to be responsible?

	Lithium
	Sodium valproate
	Venlafaxine

	Diazepam
	Quetiapine

Dashboard

Overall score: **0%**
1 -

□ Question 65 of 156



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	Sodium valproate
	Venlafaxine

	Diazepam
	Quetiapine

Dashboard

Overall score: **0%**
1 -

□ Question 66 of 156



A 75 year old woman was admitted to the Emergency Department after collapsing in her General Practitioner's surgery. She had been unwell for five days with profuse diarrhoea up to 10 times per day and regular vomiting. Her husband reported that she had been unable to keep down oral fluids for the past two days. There was no history of foreign travel but she had visited her grandson the previous weekend who had been suffering from a vomiting illness. Past medical history was unremarkable except for a hysterectomy at age 55 years for fibroids and a laparoscopic cholecystectomy for biliary colic at age 65 years. The patient takes no regular medications.

The initial assessment of the patient documented in the Emergency Department is detailed below.

Airway: patient's own

Breathing: respiration shallow but no overt respiratory distress; respiratory rate 24 / min; oxygen saturations 100 % (15 L O₂); chest clear and resonant; trachea central

Circulation: very dry mucous membranes; capillary refill time 7 seconds; blood pressure 70/30 mmHg; heart rate 130 / minute regular

Disability: GCS 12; temperature 35.9 oCelsius, pupils equal and reactive to light; spontaneous movements of all limbs; plantars down going bilaterally

Exposure: abdomen soft and generally mildly tender; nil other abnormality

Results from an arterial blood sample (15 L O₂) were as follows.

pH	7.31
PaCO ₂	35 mmHg (reference 32-43)
PaO ₂	162 mmHg (reference 70-100)
Bicarbonate	10.4 mmol / L (reference 20.0-26.0)
Sodium	130 mmol / L
Potassium	3.4 mmol / L

Calcium	2.12 mmol / L (reference 2.20-2.60)
Chloride	105 mmol / L (reference 99-108)
Haemoglobin	12.2 g / dL
Lactate	6.5 mmol / L

During initial assessment, IV access was secured and a 500 mL bolus of 0.9 % saline was given. Repeat observation after initial fluid showed BP 72/34 mmHg with heart rate 126 / minute. The patient remained drowsy.

What is the most appropriate next fluid prescription for this patient?

<input type="radio"/>	1000 mL 0.9 % saline over 60 minutes
<input type="radio"/>	500 mL 0.9 % saline over 15 minutes
<input type="radio"/>	500 mL Gelofusine over 15 minutes
<input type="radio"/>	1000 mL Gelofusine over 60 minutes
<input type="radio"/>	100 mL 20 % human albumin solution over 15 minutes

Dashboard

Overall score: **0%**

1 -

□ Question 66 of 156

□ □

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	1000 mL Gelofusine over 60 minutes
	100 mL 20 % human albumin solution over 15 minutes

Dashboard

Overall score: **0%**

1 -

□ Question 67 of 156



A 30-year-old man was brought in after being found unconscious in a club by his friends. His friends report he may have taken some 'Ecstasy' pills in the club but were unsure how many, and he was confused and agitated prior to being found in the toilet unconscious. His past medical history includes depression, for which he was taking fluoxetine 40mg daily.

On examination, he was drowsy, with a temperature of 39°C, heart rate of 120bpm, respiratory rate of 22 breaths per minute, oxygen saturation of 96% on air, and a blood pressure of 160/98mmHg. He was sweating and had a tremor in his arms. Pupils were dilated, equal and reactive to light. He was hypertonic and hyper-reflexic in his arms and legs.

Investigations

Na+	136 mmol/l
K+	4.6 mmol/l
Urea	10.9 mmol/l
Creatinine	90 µmol/l
Creatine kinase	274 IU/L
Serum bilirubin	14 µmol/l
Serum alkaline phosphatase	105 IU/l
Serum aspartate aminotransferase	20 IU/l
C-Reactive protein	2 mg/l
Haemoglobin	146 g/l
White cell count	$6.6 \times 10^9/L$
INR	1.1

Intravenous fluids were started and a bolus dose of Lorazepam was given. What other medication may be useful to manage this patient?

	Dantrolene
	Buspirone
	Procyclidine
	Dextromethorphan
	Phenelzine

Dashboard

Overall score: 0%

1 -

□ Question 67 of 156



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	Buspirone
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	Dextromethorphan
	Phenelzine

Dashboard

Overall score: **0%**
1 -

□ Question 68 of 156



An elderly lady brings her 32-year-old lodger into the emergency department after she witnesses him having two generalised seizures, lasting for around 4 minutes before spontaneously terminating, followed by a loss of consciousness lasting for around 10 minutes before slowly becoming rousable again. He is not known to have a history of epilepsy and does not take any regular medications. He denies any history of illicit drugs, smoking or excessive alcohol intake, corroborated by his landlady, who reports not to have seen him ever drinking in the 4 years he has been living in her loft space. Apart from a mild headache, he claims to have been well recently, continuing to work on his start-up computer software in the loft. She states that he has always 'kept himself to himself' in a cluttered dark loft space without a window, with a simple mattress and a small wardrobe. He didn't even ask for an additional heater during the cold winter as he thought 'the loft gas boiler provides enough warmth'. On examination, he is slightly sleepy but rousable. His Glasgow Coma Score is E4 V5 M6. Apart from erythematous lips, you note no other remarkable features. Neurological examination of his cranial nerves, upper and lower limbs are unremarkable. There is no ophthalmoscope available. His observations are heart rate 90/min and regular, BP 132/88 mmHg, sats 98% on air.

His blood tests demonstrate:

Hb	159 g/l
Platelets	$282 \times 10^9/l$
WBC	$7.9 \times 10^9/l$

Na ⁺	143 mmol/l
K ⁺	4.2 mmol/l
Urea	6.1 mmol/l
Creatinine	88 μ mol/l
CRP	3 mg/l

His arterial blood gas demonstrate:

pH 7.25	

PaO2	15.8 kPa
PaCO2	2.9 kPa
Lactate	4.5 mmol/l
HbCO	24%

A CT head demonstrates a small area of acute ischaemic change in the right globus pallidus.

Which is the most appropriate next management?

	High flow oxygen
	Aspirin 300mg
	Clopidogrel 300mg
	PO chlordiazepoxide 40mg QDS
	Start levetiracetam 250mg BD

Dashboard

Overall score: 0%

1 -

□ Question 68 of 156



An elderly lady brings her 32-year-old lodger into the emergency department after she witnesses him having two generalised seizures, lasting for around 4 minutes before spontaneously terminating, followed by a loss of consciousness lasting for around 10 minutes before slowly becoming rousable again. He is not known to have a history of epilepsy and does not take any regular medications. He denies any history of illicit drugs, smoking or excessive alcohol intake, corroborated by his landlady, who reports not to have seen him ever drinking in the 4 years he has been living in her loft space. Apart from a mild headache, he claims to have been well recently, continuing to work on his start-up computer software in the loft. She states that he has always 'kept himself to himself' in a cluttered dark loft space without a window, with a simple mattress and a small wardrobe. He didn't even ask for an additional heater during the cold winter as he thought 'the loft gas boiler provides enough warmth'. On examination, he is slightly sleepy but rousable. His Glasgow Coma Score is E4 V5 M6. Apart from erythematous lips, you note no other remarkable features. Neurological examination of his cranial nerves, upper and lower limbs are unremarkable. There is no ophthalmoscope available. His observations are heart rate 90/min and regular, BP 132/88 mmHg, sats 98% on air.

His blood tests demonstrate:

Hb	159 g/l
Platelets	$282 \times 10^9/l$
WBC	$7.9 \times 10^9/l$

Na ⁺	143 mmol/l
K ⁺	4.2 mmol/l
Urea	6.1 mmol/l
Creatinine	88 μ mol/l
CRP	3 mg/l

His arterial blood gas demonstrate:

pH 7.25	

PaO2	15.8 kPa
PaCO2	2.9 kPa
Lactate	4.5 mmol/l
HbCO	24%

A CT head demonstrates a small area of acute ischaemic change in the right globus pallidus.

Which is the most appropriate next management?

	High flow oxygen
	Aspirin 300mg
	Clopidogrel 300mg
	PO chlordiazepoxide 40mg QDS
	Start levetiracetam 250mg BD

Dashboard

Overall score: **0%**

1 -

Question 69 of 156

A 48-year-old farmer is found in a state of distress having collapsed whilst mixing insecticides in his barn. On arrival in the Emergency department, he is confused, salivating excessively, and has been incontinent of urine and faeces. You note noisy breathing, his blood pressure is 90/60 mmHg, with a pulse of 48 beats per minute.

Which of the following is the most appropriate intervention?

	Atropine
	Hyoscine
	Glucagon
	NG activated charcoal
	Noradrenaline

Dashboard

Overall score: 0%

1 -

Question 69 of 156

A 48-year-old farmer is found in a state of distress having collapsed whilst mixing insecticides in his barn. On arrival in the Emergency department, he is confused, salivating excessively, and has been incontinent of urine and faeces. You note noisy breathing, his blood pressure is 90/60 mmHg, with a pulse of 48 beats per minute.

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	Atropine
	Hyoscine
	Glucagon
	NG activated charcoal
	Noradrenaline

Dashboard

Overall score: **0%**

1 -

Question 70 of 156

A 32-year-old woman is reviewed in the respiratory clinic. She was admitted some 6 weeks earlier with acute severe asthma which required a period of ventilation. She is already treated with maximum dose salmeterol / fluticasone combination inhaler, montelukast and low dose oral corticosteroids, and a decision is made to start her on omalizumab.

Which of the following reflects the mode of action of omalizumab?

<input type="checkbox"/>	Anti-IgE
<input type="checkbox"/>	Anti-TNF
<input type="checkbox"/>	Anti-IL6
<input type="checkbox"/>	Anti-IL13
<input type="checkbox"/>	Anti-IL22

Dashboard

Overall score: **0%**

1 -

Question 70 of 156

□ □

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	Anti-IgE
	Anti-TNF
	Anti-IL6
	Anti-IL13
	Anti-IL22

Dashboard

Overall score: **0%**

1 -

Question 71 of 156

□ □

A 43 year old man attends for follow up at the Infectious Diseases clinic. He is an HIV-positive patient who has been well while on treatment for the last 13 years. His current treatment regimen is emtricitabine, atazanavir and tenofovir. He has however begun to notice altered taste and a difficulty in swallowing over the last couple of months. In the last few days he has even noticed a white coating in his mouth that is not removed by vigorous scrubbing with his toothbrush. He describes being compliant with his medications and not taking any illicit drugs. He no longer has unprotected sexual intercourse. The only change that is identified is that he recently visited his GP with non-specific symptoms and was started on a new medication.

CD4 count in clinic 4 months ago 526
CD4 count currently 210

What medication is the GP likely to have started?

	Lansoprazole
	Aspirin
	Amitriptyline
	Paracetamol
	Simvastatin

Dashboard

Overall score: 0%

1 -

Question 71 of 156

□ □

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	Aspirin
	Amitriptyline
	Paracetamol
	Simvastatin

Dashboard

Overall score: **0%**

1 -

Question 72 of 156

□ □

A 75-year-old woman presents to her general practitioner (GP) due to increased tiredness and weight gain. Her past medical history includes hypothyroidism and hypertension, for which she takes levothyroxine and amlodipine.

She last saw the GP two weeks previously when she was started on ferrous sulphate due to mild anaemia.

What is the most likely cause of her symptoms?

	Bowel malignancy
	Addison's disease
	Amlodipine toxicity
	Undercorrected hypothyroidism
	Worsening anaemia

Dashboard

Overall score: 0%

1 -

Question 72 of 156

A 75-year-old woman presents to her general practitioner (GP) due to increased tiredness and weight gain. Her past medical history includes hypothyroidism and hypertension, for which she takes levothyroxine and amlodipine.

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Dashboard

Overall score: **0%**

1 -

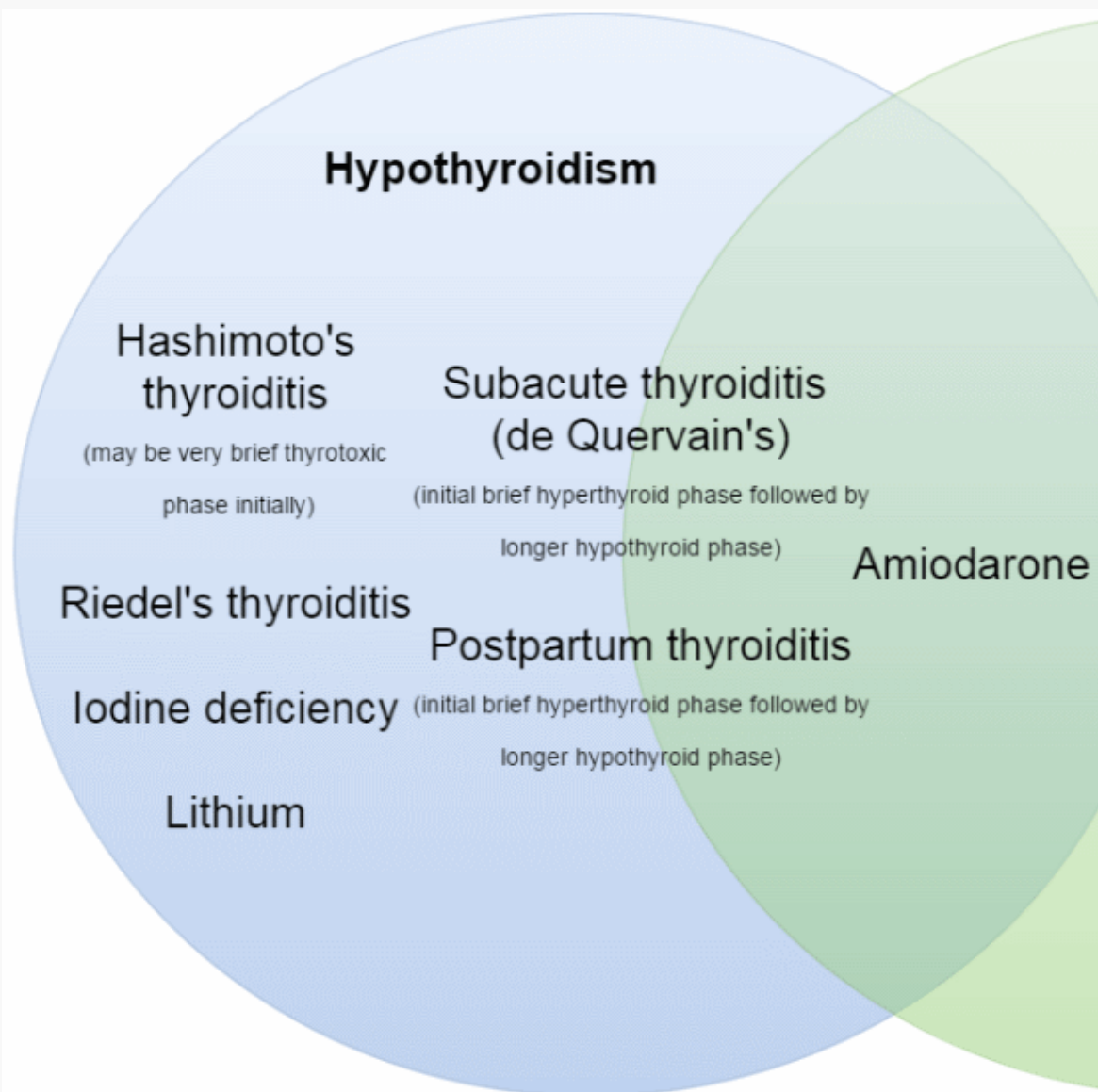
Question 72 of 156

A 75-year-old woman presents with a medical history includes hypertension and hypercholesterolaemia.

She last saw the GP two weeks ago.

What is the most likely cause of her hypothyroidism?

<input type="checkbox"/>	Bowel malignancy
<input type="checkbox"/>	Addison's disease
<input type="checkbox"/>	Amlodipine toxicity
<input checked="" type="checkbox"/>	Undercorrected hyperthyroidism
<input type="checkbox"/>	Worsening anaemia



Dashboard

Overall score: **0%**

1 -

Question 73 of 156

□ □

A 25-year-old woman is started on antiretroviral therapy for HIV. She attends the GP 1 week later complaining of dizziness and nightmares. She is unable to work due to feeling muddled and disconnected. Which drug is responsible?

	Abacavir
	Efavirinz
	Lamivudine
	Tenofovir
	Zidovudine

Dashboard

Overall score: **0%**

1 -

□ Question 73 of 156

□ □

A 25-year-old woman is started on antiretroviral therapy for HIV. She attends the GP 1 week later complaining of dizziness and nightmares. She is unable to work due to feeling muddled and disconnected. Which drug is responsible?

	Abacavir
	Efavirenz
	Lamivudine
	Tenofovir
	Zidovudine

Dashboard

Overall score: **0%**

1 -

□ Question 74 of 156



A 28-year-old woman attended the emergency department and was subsequently referred to the cardiology team due to concerns about the risk of potential cardiac arrhythmia. The patient presented to the emergency department due to ongoing nausea and vomiting secondary to hyperemesis gravidarum. The patient stated she was 10 weeks pregnant with her first child and had been suffering from these symptoms for the past 6 weeks. Clinical records indicated the patient had also attended the emergency department 3 weeks previously with the same presenting complaint.

On the initial occasion the patient had presented to the emergency department with hyperemesis gravidarum, she had been rehydrated with intravenous fluids and prescribed vitamin B6 and ginger capsules four times daily on the advice of the obstetric team. The patient reported that this treatment had given her only a modest improvement in her symptoms and she had stopped taking these medications after a few days. Subsequently, she had attended an out-of-hours medical centre and been prescribed ondansetron (4 mg three times daily). The patient had found a more significant benefit from ondansetron and had been taking it regularly over the past 2 weeks. In addition to her symptoms of nausea and vomiting, the patient reported feeling tired, lethargic and dehydrated. However, she denied experiencing any other symptoms, including palpitations or pre-syncopal episodes.

The patient's past medical history included a period of intravenous drug use in her early twenties. Three years previously the patient had successfully managed to stop her use of illicit drugs after being enrolled in a methadone treatment program. The patient was now on a consistent methadone dose of 80 mg once daily. There was no other significant past medical history and the patient took no other regular medications.

During the patient's assessment after attending the emergency department, concern was raised over a prolonged corrected QT interval on an ECG performed due to borderline hypokalaemia. The patient's ECG was otherwise unremarkable and was compared to previous ECGs the patient had undergone on her previous visits to the emergency department. Please see below for blood results and data from the patient's current and previous ECG.

Haemoglobin	123 g / dL
Mean cell volume	84.9 fl
White cell count	11.7 x 10 ⁹ / microlitre
Platelets	187 x 10 ⁹ / microlitre
Urea	9.0 mmol / L

Creatinine	82 micromol / L
Sodium	139 mmol / L
Potassium	3.6 mmol / L

Presentation	Relative date of ECG	Corrected QT interval / ms
2nd ED attendance for hyperemesis	Today	490
1st ED attendance for hyperemesis	3 weeks previously	430
Unrelated ED attendance	4 years previously	415

With regard to the patient's prolonged corrected QT interval, what is the most appropriate strategy for managing her medications?

	Continue both methadone and ondansetron and admit for cardiac monitoring
	Stop both methadone and ondansetron
	Continue both methadone and ondansetron and arrange outpatient ambulatory ECG
	Continue methadone, stop ondansetron
	Continue ondansetron, stop methadone

Dashboard

Overall score: **0%**

1 -

□ Question 74 of 156



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	Continue methadone, stop ondansetron
	Continue ondansetron, stop methadone

Dashboard

Overall score: **0%**

1 -

□ Question 75 of 156

□ □

A 77-year-old woman with a long history of atrial fibrillation comes to the Emergency department following a collapse at the local supermarket. She is treated with digoxin for rate control, and anti-coagulated with warfarin. Apparently she has been unwell with diarrhoea over the past few days but has continued to take her regular medication. On examination her blood pressure is 90/50 mmHg, pulse is 88 beats per minute and regular. You note short runs of ventricular tachycardia on the monitor whilst you are listening to her chest. Bloods include:

Na ⁺	145 mmol/l
K ⁺	3.5 mmol/l
Urea	14.1 mmol/l
Creatinine	188 µmol/l
Digoxin	3 nmol/l

Which of the following is the most appropriate intervention?

	Amiodarone
	Flecainide
	Verapamil
	Magnesium
	Phenytoin

Dashboard

Overall score: 0%

1 -

□ Question 75 of 156

□ □

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Urea	14.1 mmol/l
Creatinine	188 µmol/l
Digoxin	3 nmol/l

Which of the following is the most appropriate intervention?

	Amiodarone
	Flecainide
	Verapamil
	Magnesium
	Phenytoin

Dashboard

Overall score: **0%****1** -

□ Question 76 of 156



A 43 year old man is brought to the Emergency Department by his wife. She has become worried about him in the past six months as he has become increasingly confused, aggressive and depressed. He has also lost 4kg in weight in this time and has developed severe, intermittent abdominal pain and diarrhoea, and complains of constant headaches.

Examination reveals a normal cardiorespiratory examination but the abdomen is diffusely tender and there is tender fullness in the right upper quadrant. Neurological examination reveals minor hypotonia throughout and there are bilateral radial nerve palsies as well as a left common peroneal nerve palsy. Sensation appears intact. He is alert but confused with an abbreviated mental test score of 7/10.

Blood tests reveal:

Sodium	136mmol/L	ALP	135U/L	Haemoglobin	79g/L
Potassium	5.1mmol/L	AST	265U/L	MCV	101fL
Urea	7.1mmol/L	ALT	298U/L	White cells	$9.4 \times 10^9/L$
Creatinine	102 μ mol/L	GGT	197U/L	Neutrophils	$5.6 \times 10^9/L$
CRP	10mg/L	Bilirubin	12 μ mol/L	Lymphocytes	$3.1 \times 10^9/L$
Calcium (corr)	2.34mmol/L			Eosinophils	$0.1 \times 10^9/L$
Phosphate	0.56mmol/L			Basophils	$0.6 \times 10^9/L$
Magnesium	0.76mmol/L				
Glucose	3.8mmol/L				

The blood film shows anaemia with a dimorphic picture, significant reticulocytosis and high basophil numbers with cytoplasmic stippling.

The patients wife tells you all the symptoms coincided with the patient starting a new job as a loading crane driver at a scrap-yard.

What is the most likely diagnosis?

	Chronic alcoholism
	Acute promyelocytic leukaemia
	Porphyria cutanea tarda
	Chronic lead poisoning
	Minimata disease

Dashboard

Overall score: **0%**

1 -

Question 76 of 156



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Overall score: **0%**
1 -

□ Question 76 of 156



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	Chronic lead poisoning
	Minimata disease

Dashboard

Overall score: **0%**
1 -

Mitochondria

Cytosol

Glycine + succinyl-CoA

Sideroblastic
anemia

ALA synthase

δ -aminolevulinic acid

Lead poisoning

ALA dehydratase

Porphobilinogen

Porphobilinogen deaminase

AIP

Hydroxymethylbilane

Uroporphyrinogen III

Uroporphyrinogen
decarboxylase

PCT

Coproporphyrinogen III

Protoporphyrin

Fe^{2+}

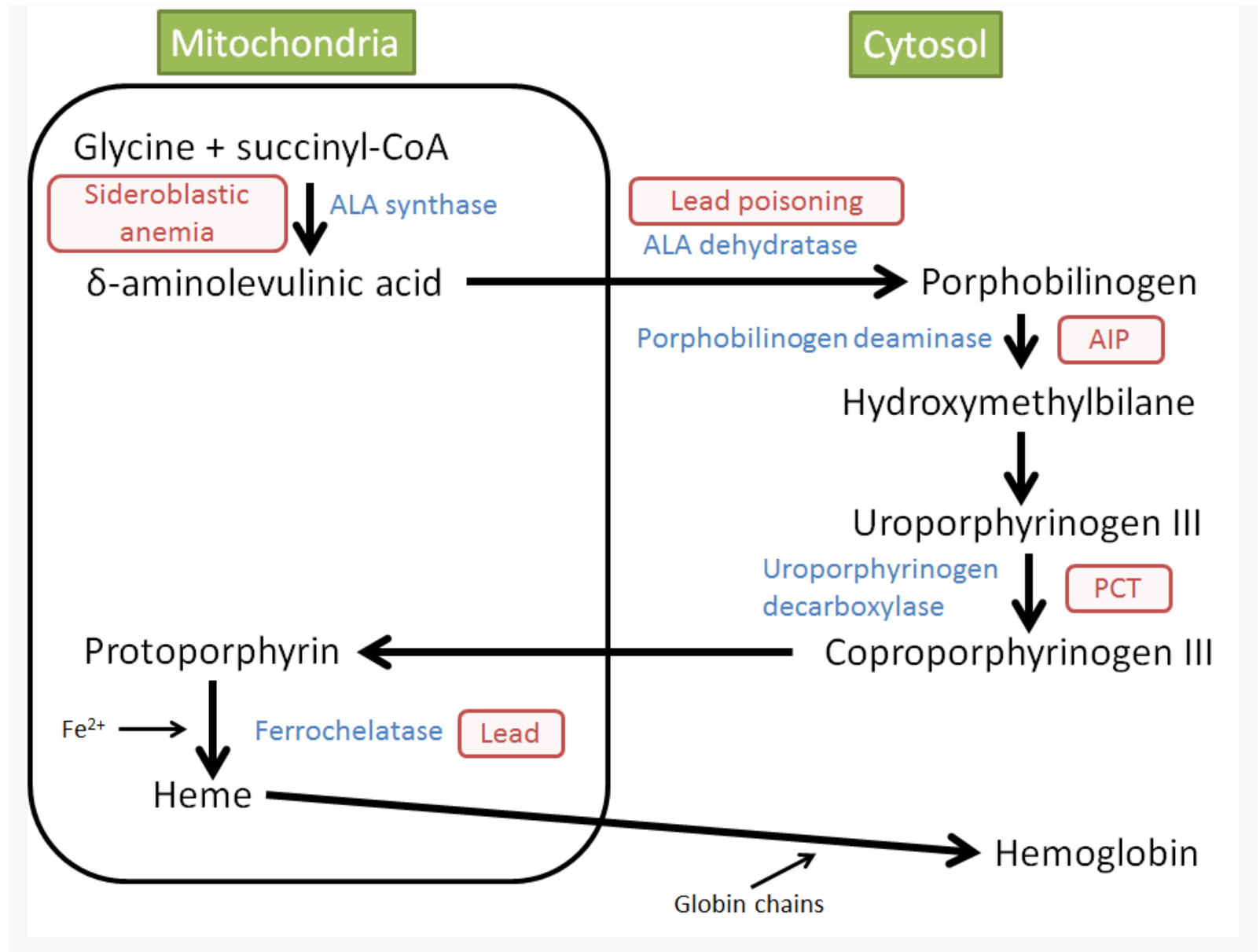
Ferrochelatase

Lead

Heme

Hemoglobin

Globin chains



□ Question 77 of 156

□ □

A 53-year-old woman is called to clinic for review following abnormal blood tests. Two weeks ago her GP increased her dose of ramipril to 10mg from 5mg as her blood pressure was poorly controlled. She has recently had a flare of her rheumatoid arthritis. She feels systemically well and is not dehydrated. Her current medications include ramipril, simvastatin, aspirin, paracetamol, omeprazole and naproxen as needed. She has been taking naproxen for the right five days due to a flare in rheumatoid arthritis

Blood tests:

	26/11/2016	9/11/2016
Na ⁺	139 mmol/l	140 mmol/l
K ⁺	4.6 mmol/l	4.3 mmol/l
Urea	5.5 mmol/l	5.8 mmol/l
Creatinine	85 µmol/l	64 µmol/l

How should her medications be managed?

	Stop naproxen and continue ramipril
	Stop naproxen
	Stop naproxen and stop ramipril
	Reduce the dose of ramipril
	Stop ramipril

Dashboard

Overall score: 0%

Question 77 of 156

□ □

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Dashboard

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□ Question 77 of 156

□ □

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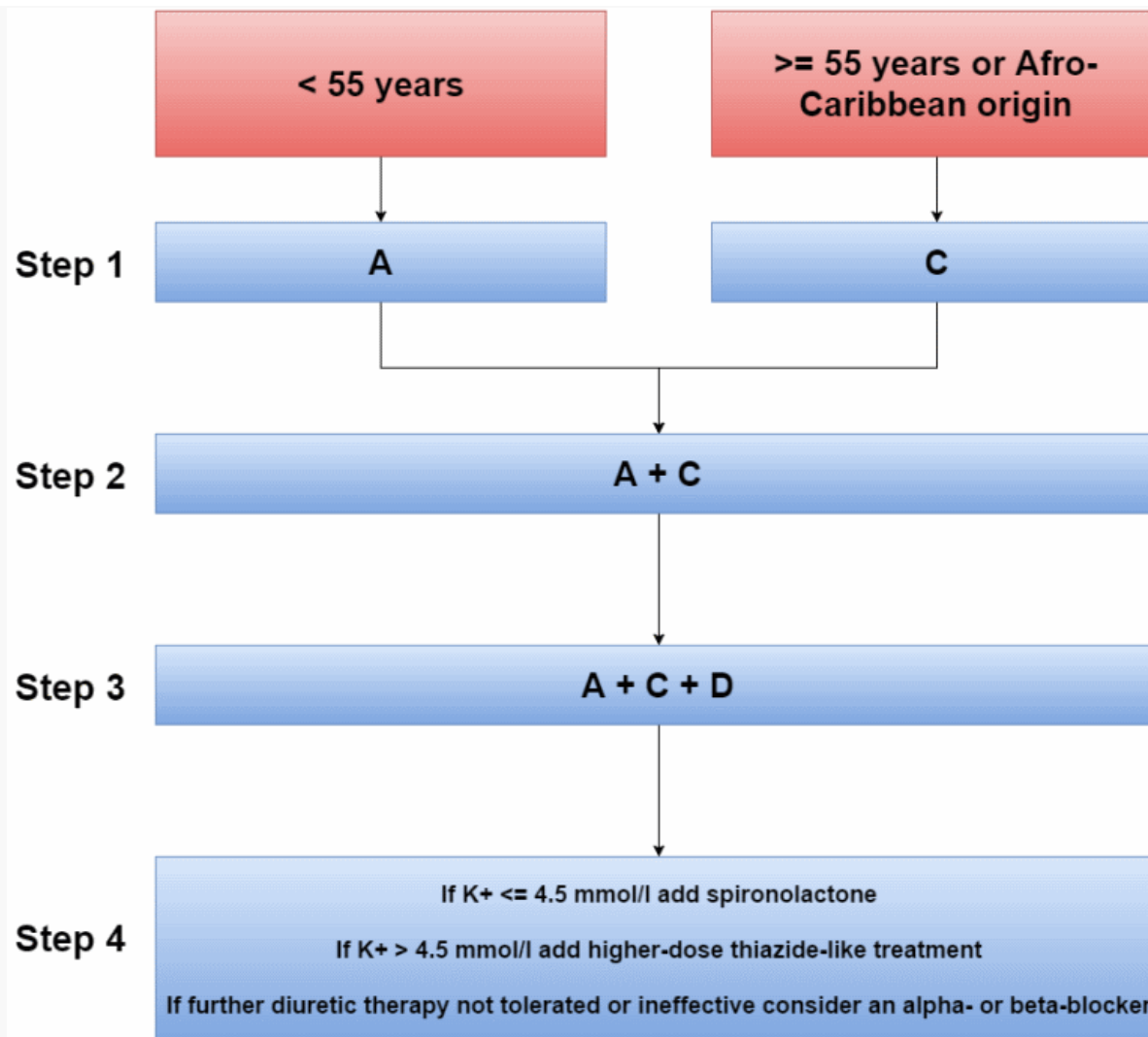
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Dashboard

Overall score: 0%

1 -



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Key

A = ACE inhibitor

C = Calcium channel blocker

D = Thiazide Diuretic

Question 78 of 156

□ □

A 68-year-old female accountant on azathioprine for systemic lupus erythematosus (SLE) presented to the rheumatology clinic for her usual yearly follow up. She is clinically well and her blood investigations show stable disease but you note raised serum uric acid. She also volunteers that she intermittently suffers excruciatingly painful, red and swollen joints including her left first metatarsophalangeal joint and right ankle. These episodes improve with diclofenac. She is currently asymptomatic. Based on her symptoms you strongly suspect that she suffers from recurrent episodes of gout.

In the management of gout in this patient, which of the following prescription medications should you strongly avoid?

	Diclofenac
	Allopurinol
	Colchicine
	Probenecid
	Prednisolone

Dashboard

Overall score: 0%

1 -

□ Question 78 of 156

□ □

A 68-year-old female accountant on azathioprine for systemic lupus erythematosus (SLE) presented to the rheumatology clinic for her usual yearly follow up. She is clinically well and her blood investigations show stable disease but you note raised serum uric acid. She also volunteers that she intermittently suffers excruciatingly painful, red and swollen joints including her left first metatarsophalangeal joint and right ankle. These episodes improve with diclofenac. She is currently asymptomatic. Based on her symptoms you strongly suspect that she suffers from recurrent episodes of gout.

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	Diclofenac
	Allopurinol
	Colchicine
	Probenecid
	Prednisolone

Dashboard

Overall score: **0%****1** -

Question 79 of 156



A 57-year-old male is admitted to hospital with an acute kidney injury (AKI). His past medical history includes polycystic kidney disease for which he received a renal transplant 4 years ago, and type 2 diabetes mellitus. His drug history includes tacrolimus, mycophenolate mofetil, amlodipine and simvastatin. Tacrolimus toxicity is suspected to have caused his AKI.

He informs you that he has only recently been discharged, where he was started on rifampicin and erythromycin for Legionnaires' disease. He was also started on pioglitazone after a diabetic team review.

Which of his other medications is the most likely culprit of the tacrolimus toxicity?

	Pioglitazone
	Erythromycin
	Simvastatin
	Rifampicin
	Mycophenolate mofetil

Dashboard

Overall score: 0%

1 -

Question 79 of 156



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	Pioglitazone
	Erythromycin
	Simvastatin
	Rifampicin
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Dashboard

Overall score: 0%

1 -

□ Question 80 of 156



A 31 year old man is brought to the Emergency Department from a nightclub. He is accompanied by a friend who tells you he has taken the street drug NRG-1. The patient is agitated and difficult to assess as he will not stay on the trolley. He is sweating profusely and his skin has a blue tinge to it. Formal assessment is impossible but he is obviously confused and appears to be hallucinating. Examination shows a heart rate of 139bpm with a blood pressure of 158/105mmHg. Heart sounds are rapid but with no murmurs. The chest is clear to auscultation and oxygen saturations are 99% on air but his respiratory rate is 36/min. He is globally hypertonic with marked clonus in the lower limbs. Tympanic temperature is 40.6°C.

Blood results show:

Haemoglobin	129g/L	Sodium	119mmol/L	Creatine Kinase	1895ng/mL
Haematocrit	0.29	Potassium	5.5mmol/L	CRP	8.9mg/L
White cells	15.6x10 ⁹ /L	Chloride	90mmol/L		
Neutrophils	11.7x10 ⁹ /L	Urea	7.2mmol/L		
Platelets	303x10 ⁹ /L	Creatinine	100µmol/L		

Urine is dilute but contains blood, protein and ketones on dipstick analysis

Which one of the following interventions is the most appropriate in the first instance?

	Rapid intravenous infusion of 0.9% sodium chloride with 1g IV paracetamol
	Rapid intravenous infusion of 3% sodium chloride with 1g IV paracetamol
	Slow intravenous infusion of 3% sodium chloride with 10mg IV midazolam
	Slow intravenous infusion of 3% sodium chloride with 1g IV paracetamol and oral cyproheptadine 12mg
	Intravenous methylene blue (methylthioninium chloride) 1mg/kg over 5 minutes

Dashboard

Overall score: **0%**

1 -

□ Question 80 of 156

□ □

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Blood results show:

Haemoglobin	129g/L	Sodium	119mmol/L	Creatine Kinase	1895ng/mL
Haematocrit	0.29	Potassium	5.5mmol/L	CRP	8.9mg/L
White cells	15.6x10 ⁹ /L	Chloride	90mmol/L		
Neutrophils	11.7x10 ⁹ /L	Urea	7.2mmol/L		
Platelets	303x10 ⁹ /L	Creatinine	100µmol/L		

Urine is dilute but contains blood, protein and ketones on dipstick analysis

Which one of the following interventions is the most appropriate in the first instance?

	Rapid intravenous infusion of 0.9% sodium chloride with 1g IV paracetamol
	Rapid intravenous infusion of 3% sodium chloride with 1g IV paracetamol
	Slow intravenous infusion of 3% sodium chloride with 10mg IV midazolam
	Slow intravenous infusion of 3% sodium chloride with 1g IV paracetamol and oral cyproheptadine 12mg
	Intravenous methylene blue (methylthioninium chloride) 1mg/kg over 5 minutes

Dashboard

Overall score: **0%**

1 -

□ Question 81 of 156



A 19 year old woman is brought to the Emergency Department by ambulance following a deliberate overdose of imipramine tablets.

On primary assessment, the airway is stabilised with a Guedel oropharyngeal adjunct. Breaths are shallow with a rate of 20 and oxygen saturations are 96% on 15L/min oxygen via non-rebreathe mask. Blood pressure is 72/44mmHg with a heart rate of 127bpm. Cardiac monitoring reveals a wide complex tachycardia. The GCS is depressed at 6/15 with widely dilated pupils, hypertonia, hyperreflexia and upgoing plantars.

An arterial blood gas sample reveals:

pH	7.00	Potassium	4.5mmol/L
pCO ₂	7.12kPa	Chloride	97mmol/L
pO ₂	19.8kPa	Lactate	3.8mmol/L
HCO ₃ ⁻	3.7mmol/L	Glucose	8.4mmol/L
BE	-24.5mmol/L		

The patient is intubated and ventilated on mandatory positive pressure ventilation and aggressively fluid resuscitated. She is infused with 150ml 8.4% sodium bicarbonate solution and within 15 minutes the pH is 7.27. The blood pressure remains below 80mmHg systolic and the ECG still shows broad complex tachycardia but a normal QT interval.

Which intervention is the next most appropriate?

	5g (20mmol) magnesium sulphate intravenously
	300mg amiodarone loading with 900mg infusion over 24 hours
	20% lipid emulsion bolus with 500ml infusion over 1 hour
	100J synchronised DC shock

Dashboard

Overall score: **0%**

1 -

□ Question 81 of 156



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On primary assessment, the airway is stabilised with a Guedel oropharyngeal adjunct. Breaths are shallow with a rate of 20 and oxygen saturations are 96% on 15L/min oxygen via non-rebreathe mask. Blood pressure is 72/44mmHg with a heart rate of 127bpm. Cardiac monitoring reveals a wide complex tachycardia. The GCS is depressed at 6/15 with widely dilated pupils, hypertonia, hyperreflexia and upgoing plantars.

An arterial blood gas sample reveals:

pH	7.00	Potassium	4.5mmol/L
pCO2	7.12kPa	Chloride	97mmol/L
pO2	19.8kPa	Lactate	3.8mmol/L
HCO3-	3.7mmol/L	Glucose	8.4mmol/L
BE	-24.5mmol/L		

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Dashboard

Overall score: **0%**

1 -

Question 82 of 156

□ □

A 63-year-old woman returns to neurology clinic for review with her husband. She was diagnosed with Parkinson's disease two years ago and was started on ropinirole six months ago as her symptoms were becoming difficult to manage. She was mainly concerned with the rigidity of her movements. Since then she has improved remarkably, and her movements are much better, with reduced rigidity on examination. Her mood has also been improving with the relief from her symptoms.

However, her husband has become concerned that she has been increasingly spending large amounts on shopping, something which has not done before and that he feels is out of character. What is the most likely explanation?

	Normal behaviour
	Progression of Parkinson's disease
	Lewy-body dementia
	Dopaminergic dysregulation syndrome
	Impulse control disorder

Dashboard

Overall score: 0%

1 -

Question 82 of 156

□ □

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	Normal behaviour
	Progression of Parkinson's disease
	Lewy-body dementia
	Dopaminergic dysregulation syndrome
	Impulse control disorder

Dashboard

Overall score: **0%**

1 -

Question 83 of 156

You are the medical basic specialist trainee on call and have been asked to see a gentleman who has just been admitted for a bad chest infection. According to the ward nurse, he has developed an allergic reaction after five minutes of vancomycin i.v infusion.

On arrival you proceed to examine this young man who is febrile, obviously unwell and receiving oxygen via nasal prongs. He claims he had not developed any new symptoms since admission but felt sudden warmth and flushing few minutes into his vancomycin drip. On examination he has crepitations in his left base.

Apart from generalised erythema he appears to be stable and there is no immediate danger to his airways. His blood pressure was 105/67mmHg, pulse was 99b/min and oxygen saturation on 4L oxygen was 95% (all observations are similar to previous readings). He has never taken vancomycin but states he is allergic to penicillin and ciprofloxacin.

Given the likely diagnosis, what is the next step in your management?

<input type="checkbox"/>	Immediately stop vancomycin
<input type="checkbox"/>	Continue vancomycin but at a slower rate
<input type="checkbox"/>	Continue vancomycin rate unchanged
<input type="checkbox"/>	Administer i.v chlorphenamine maleate and stop vancomycin
<input type="checkbox"/>	Urgent i.m adrenaline

Dashboard

Overall score: 0%

1 -

Question 83 of 156



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	Continue vancomycin but at a slower rate
	Continue vancomycin rate unchanged
	Administer i.v chlorphenamine maleate and stop vancomycin
	Urgent i.m adrenaline

Dashboard

Overall score: **0%**

1 -

Question 84 of 156



A 31-year-old ICU nurse is brought to the Emergency Department following an unresponsive episode during a busy shift at work. His colleague described him becoming pale and sweating profusely, before collapsing to the ground and becoming unresponsive. No jerking movements were observed.

His past medical history is unremarkable and he takes no regular medications.

On examination, the patient is pale and sweaty. His GCS is 9/15. His pulse is 106bpm and his blood pressure is 118/67mmHg. His chest is clear and his abdomen is soft and non-tender. There are linear, well-healed scars over the volar aspects of both forearms. His capillary blood glucose measurement is 1.6 mmol/l.

The patient is given 250ml of 10% dextrose solution through a large-bore peripheral venous cannula and his GCS improves to 15/15. His initial blood test results are:

Hb	135 g/l	Na ⁺	139 mmol/l
Platelets	221 * 10 ⁹ /l	K ⁺	3.5 mmol/l
WBC	7.1 * 10 ⁹ /l	Urea	4.8 mmol/l
Neuts	5.3 * 10 ⁹ /l	Creatinine	81 µmol/l
Lymphs	1.2 * 10 ⁹ /l	CRP	13 mg/l
Eosin	0.03 * 10 ⁹ /l		

Glucose	1.2 mmol/l
Insulin	254 pmol/l (<174 pmol/l)
C-peptide	1.8 nmol/l (0.26 - 1.03 nmol/l)

What is the most likely cause of the hypoglycaemia?

Exenatide poisoning

	Insulin poisoning
	Insulinoma
	Sulfonylurea poisoning
	Hepatic glycogen depletion due to missed meal breaks

Dashboard

Overall score: **0%**
1 -

□ Question 84 of 156



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	Insulinoma
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Dashboard

Overall score: **0%**
1 -

□ Question 85 of 156



A 34-year-old male was admitted after being found on the floor. He admitted to drinking too much alcohol, and had taken cannabis and inhaled nitrate based poppers' with his friends. He is a long term heavy smoker, and was admitted before with alcohol toxicity and other illicit drug use but does not have other past medical history. He was admitted to the Acute Medical Unit because his saturations were only 88- 90% on 10L of oxygen despite being asymptomatic. He had a heart rate of 90 beats/min, blood pressure of 118/80 mmHg, respiratory rate of 14/min and was noticed to have peripheral cyanosis. On auscultation, there was very mild scattered wheeze, but otherwise good air entry. The arterial blood gas on air revealed the following:

pH	7.36
pCO ₂	5.8 kPa
pO ₂	10.8 kPa
HCO ₃ ⁻	22 mmol/l
BE	-2.4 mmol/l
Sats	90%
MetHb	16%
Na	136 mmol/l
K	4.6 mmol/l
Lactate	1.8 mmol/l

What is the most appropriate management?

	Reduce oxygen from high flow to 28% via venturi mask
	Nebulised salbutamol
	Methylene blue

	Start non-invasive ventilation
	Desferrioxamine

Dashboard

Overall score: **0%**

1 -

Question 85 of 156



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	Methylene blue

	Start non-invasive ventilation
	Desferrioxamine

Dashboard

Overall score: **0%**
1 -

□ Question 86 of 156

□ □

A 54-year-old woman was admitted following abnormal blood tests on routine monitoring. She is currently undergoing palliative chemotherapy with FOLFIRINOX, a combination of folinic acid, fluorouracil, irinotecan and oxaliplatin for metastatic pancreatic cancer. She has suffered from diarrhoea, vomiting, nausea and fatigue since starting treatment. She has a past medical history of hypothyroidism, epilepsy and bipolar disorder. Her regular medications include levothyroxine, levetiracetam, lithium, loperamide, paracetamol, oramorph, zomorph, movicol and ondansetron.

Na ⁺	142mmol/l
K ⁺	3.8mmol/l
Urea	4.4mmol/l
Creatinine	83μmol/l
Corrected calcium	3.3μmol/l

She is started on treatment with IV 0.9% saline and given 90mg of IV alendronate after further blood tests are sent for, and an ECG is done. Which of her regular medications should not be prescribed on admission?

	Zomorph
	Levetiracetam
	Loperamide
	Levothyroxine
	Lithium

Dashboard

Overall score: 0%

□ Question 86 of 156

□ □

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	Zomorph
	Levetiracetam
	Loperamide
	Levothyroxine
	Lithium

Dashboard

Overall score: 0%

□ Question 87 of 156



You are asked to review a 44-year-old lady in the emergency department. She is well known to the mental health liaison team because of her multiple suicide attempts. She is agitated and slightly confused and unable to give a precise history. She is able to tell you that she can't see clearly and has a dry mouth.

Her sister explains that the patient has been prescribed medicines for chronic neuropathic back pain and has taken them all after splitting up with her boyfriend.

On examination she has symmetrically dilated pupils but no focal motor deficit. Her heart sounds are normal and her lung fields are clear on auscultation. An ECG shows sinus tachycardia with a QRS of 170.

Bloods results are as follows:

Hb	125 g/l
Platelets	$440 \times 10^9/l$
WBC	$9.9 \times 10^9/l$
Na ⁺	135 mmol/l
K ⁺	4.2 mmol/l
Urea	5.1 mmol/l
Creatinine	88 μ mol/l
Plasma Paracetamol	<5mmol/l

You request an arterial blood gas which shows the following readings:

pH	7.29
pCO ₂	3.4 kPa
pO ₂	14.5 kPa

What is the most appropriate next step in this patient's management?

	IV sodium bicarbonate
	Haemodialysis
	IV lignocaine
	IV amiodarone
	Naloxone

Dashboard

Overall score: 0%

1 -

□ Question 87 of 156



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	Haemodialysis
	IV lignocaine
	IV amiodarone
	Naloxone

Dashboard

Overall score: 0%

1 -

Question 88 of 156

□ □

A 48-year-old farmer is found collapsed in his workshop having left a suicide note and consumed unknown weedkillers and insecticides from his store. On arrival in the Emergency department, his Glasgow coma scale is 10, pupils are pinpoint and poorly reactive. His blood pressure is 100/70 mmHg, his pulse is 88 beats per minute and regular. He moans incomprehensibly when you palpate his abdomen. You are concerned about the possibility of a paraquat overdose. How can you screen for it?

	Serum NADPH testing
	Serum free fatty acid testing
	Urine copper sulphate testing
	Urine ketone testing
	Urine dithionate testing

Dashboard

Overall score: 0%

1 -

Question 88 of 156

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	Serum NADPH testing
	Serum free fatty acid testing
	Urine copper sulphate testing
	Urine ketone testing
	Urine dithionate testing

Dashboard

Overall score: **0%**

1 -

Question 89 of 156

□ □

A 78-year-old man with a history of atrial fibrillation, diabetes, hypertension and peripheral neuropathy was referred to the anticoagulation clinic by his General Practitioner due to difficulty controlling the international normalised ratio (INR). He is currently on 12 mg of warfarin and the dose had to be repeatedly increased as his INR has been in the subtherapeutic range in the last month.

Which one of the following medication may be responsible for the above?

	Omeprazole
	Carbamazepine
	Cimetidine
	Valproate
	Ciprofloxacin

Dashboard

Overall score: 0%

1 -

Question 89 of 156

□ □

A 78-year-old man with a history of atrial fibrillation, diabetes, hypertension and peripheral neuropathy was referred to the anticoagulation clinic by his General Practitioner due to difficulty controlling the international normalised ratio (INR). He is currently on 12 mg of warfarin and the dose had to be repeatedly increased as his INR has been in the subtherapeutic range in the last month.

Which one of the following medication may be responsible for the above?

	Omeprazole
	Carbamazepine
	Cimetidine
	Valproate
	Ciprofloxacin

Dashboard

Overall score: **0%**

1 -

Question 90 of 156

□ □

A 52-year-old gentleman presents after hearing a popping sound followed by acute onset right ankle pain. On examination he is unable to plantar flex his right ankle. He denies any recent strenuous exercise. He has never had any joint problems but does tell you he has recently been treated for a urinary tract infection. Which one of these antibiotics is likely have contributed to his presentation?

	Erythromycin
	Trimethoprim
	Nitrofurantoin
	Ciprofloxacin
	Co-amoxiclav

Dashboard

Overall score: **0%**

1 -

Question 90 of 156



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	Erythromycin
	Trimethoprim
	Nitrofurantoin
	Ciprofloxacin
	Co-amoxiclav

Dashboard

Overall score: **0%**

1 -

□ Question 91 of 156

□ □

A 45 woman is admitted with fever, night sweats and weight loss. She has a past medical history of type 1 diabetes. At a recent retinal screen there were microaneurysms and dot and blot haemorrhages noted on the periphery of both her discs. She has never noted any visual problems.

A sputum sample is positive for acid fast bacilli and she is subsequently started on Rifampicin, Isoniazid, Pyrazinamide, ethambutol and pyridoxine.

On the same admission she is diagnosed with HIV. Her CD4 count is 140 cells/ μ L. She is started cotrimoxazole and a few weeks later starts antiretroviral therapy with Efavirenz, emtricitabine and tenofovir.

She makes a good recovery and is discharged from hospital. A few months later she complains of increasingly blurry vision. Fundoscopy shows pale optic discs, microaneurysms and blot haemorrhages.

What is the most likely cause for her visual symptoms?

	CMV retinitis
	Ethambutol
	Efavirenz
	Diabetic retinopathy
	Pyrazinamide

Dashboard

Overall score: 0%

1 -

Question 91 of 156

□ □

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	CMV retinitis
	Ethambutol
	Efavirenz
	Diabetic retinopathy
	Pyrazinamide

Dashboard

Overall score: **0%**

1 -

Question 92 of 156

□ □

A 59 year old gentleman with capricious type 2 diabetes mellitus is reviewed in a community diabetic clinic. Despite optimising lifestyle and diet, glycaemic control is still poor on first line oral hypoglycaemic therapy. His diabetic consultant decides to start him on dapagliflozin 10mg daily.

Which of the following is a common side effect of dapagliflozin the patient should be warned about?

	Pancytopenia
	Jaundice
	Increased likelihood of pancreatitis
	Increased likelihood of urinary infections
	Increased risk of ischaemic heart disease

Dashboard

Overall score: 0%

1 -

Question 92 of 156

□ □

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	Increased likelihood of pancreatitis
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Dashboard

Overall score: **0%**

1 -

□ Question 92 of 156

□ □

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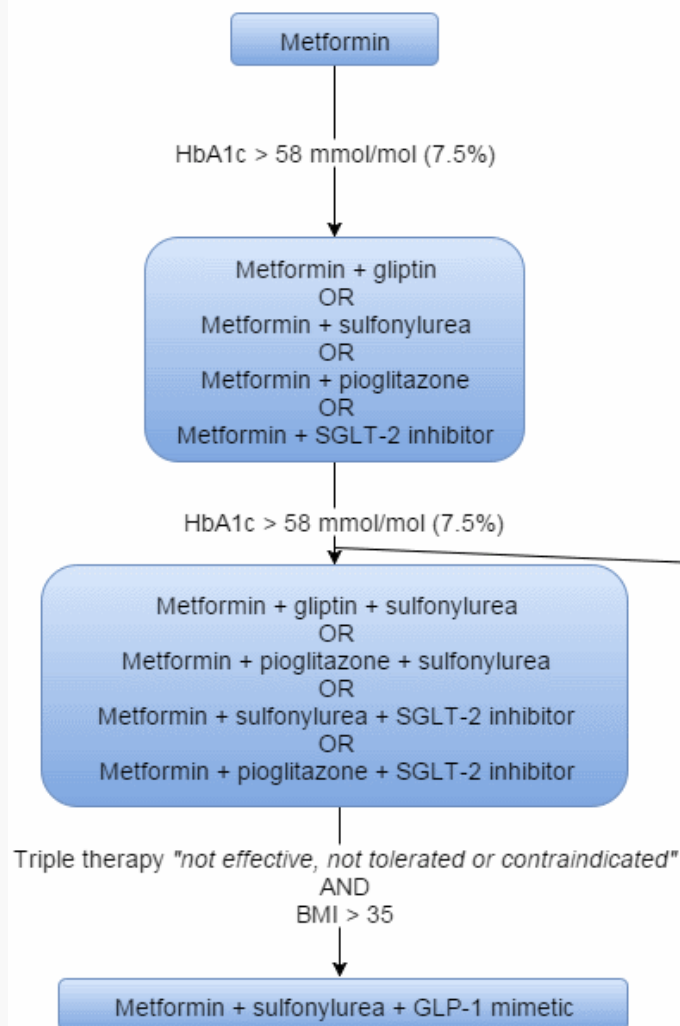
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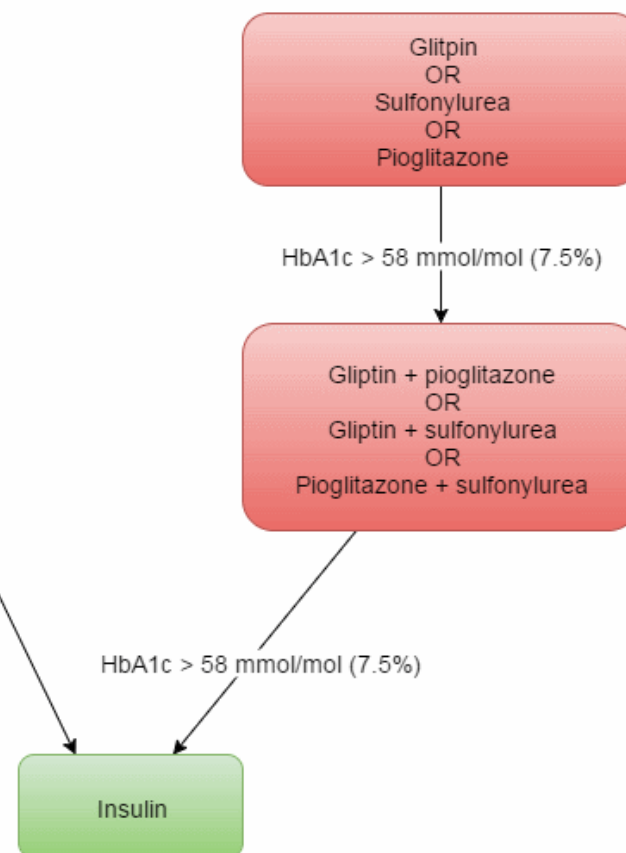
Dashboard

Overall score: **0%****1** -

Metformin



Metformin not tolerated or CI



Question 92 of 156

A 59 year old gentleman with a history of type 1 diabetes mellitus is presenting with a raised creatinine. After optimising lifestyle and diet, the consultant decides to start him on a statin.

Which of the following is a contraindication to the use of statins?

<input type="checkbox"/>	Pancytopenia
<input type="checkbox"/>	Jaundice
<input type="checkbox"/>	Increased likelihood of myopathy
<input checked="" type="checkbox"/>	Increased likelihood of liver enzyme abnormalities
<input type="checkbox"/>	Increased risk of ischaemic heart disease

Primary prevention

(10-year cardiovascular risk $\geq 10\%$ OR
most type 1 diabetics OR
CKD if eGFR $< 60\text{ml/min/m}^2$)



Atorvastatin 20mg od

(if non-HDL has not fallen by $\geq 40\%$ then
consider titrating up to 80mg)

Dashboard

Overall score: 0%

1 -

□ Question 93 of 156

□ □

A 24-year-old lady presents 16 weeks pregnant. She complains of myalgia, sore throat and coryza and is noted to have a pyrexia of 38.1. She works in a nursing home which is currently closed due to an influenza A outbreak. On further questioning, you note that she has been vomiting every morning for the past 8 weeks and is no longer able to take oral medication. On examination her chest is clear but she is obviously coryzal with an erythematous oropharynx (no exudate). Chest X-ray is clear. Apart from informing the obstetrics team, how would you manage this patient?

	Admit, isolate and commence oseltamivir
	Admit and observe
	Oral antibiotics
	Admit, isolate and commence zanamivir
	Admit, isolate and await nose and throat swabs before commencing antiviral therapy

Dashboard

Overall score: 0%

1 -

□ Question 93 of 156

□ □

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	Oral antibiotics
	Admit, isolate and commence zanamivir
	Admit, isolate and await nose and throat swabs before commencing antiviral therapy

Dashboard

Overall score: **0%****1** -

Question 94 of 156



A 54 year old intravenous drug user is newly diagnosed with HIV, after presenting with progressive shortness of breath. He was diagnosed with pneumocystis pneumonia and commenced on appropriate treatment.

His CD4 count is 54 cells/mm3 and his viral load is 1.7 x107 copies per ml.
As part of his routine work up, it is also revealed that he has co-infection with Hepatitis C. A test for HIV viral tropism is reported as dual tropism virus.

Which drug is unlikely to be effective in this mans treatment?

	Maraviroc
	Raltegravir
	Tenofovir
	Ribavirin
	Abacavir

Dashboard

Overall score: 0%

1 -

Question 94 of 156

□ □

A 54 year old intravenous drug user is newly diagnosed with HIV, after presenting with progressive shortness of breath. He was diagnosed with pneumocystis pneumonia and commenced on appropriate treatment.

His CD4 count is 54 cells/mm³ and his viral load is 1.7 x10⁷ copies per ml.

As part of his routine work up, it is also revealed that he has co-infection with Hepatitis C. A test for HIV viral tropism is reported as dual tropism virus.

Which drug is unlikely to be effective in this mans treatment?

	Maraviroc
	Raltegravir
	Tenofovir
	Ribavirin
	Abacavir

Dashboard

Overall score: **0%**

1 -

Question 95 of 156



A 17-year-old girl is brought to the Emergency Department by ambulance after her drink was 'spiked' at a party. Her friends recall her complaining that she felt like she was having an 'out of body experience' and that everything she touched seemed artificial. Over the next hour, she became increasingly distressed, slurring her words and appearing off-balance when walking.

Her past medical history is unremarkable. Her friends state that she does not usually partake in recreational drug use and had only consumed 2 or 3 alcoholic drinks during the course of the evening.

Examination reveals a slim young female with a temperature of 37.3, a pulse of 113bpm and a blood pressure of 137/76mmHg. Her pupils measure 5mm in diameter and she is GCS 14/15 due to persistent confusion. Her chest is clear and her heart sounds are unremarkable. Her abdomen is soft and non-tender. Neurological examination reveals bi-directional nystagmus and truncal ataxia with no focal weakness. Her deep tendon reflexes are brisk and symmetrical.

Which drug is she most likely to have been exposed to?

	Ecstasy
	Methoxetamine
	Cocaine
	Gamma-hydroxybutyric acid (GHB)
	Nexus (2C-B)

Dashboard

Overall score: 0%

1 -

Question 95 of 156



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	Methoxetamine
	Cocaine
	Gamma-hydroxybutyric acid (GHB)
	Nexus (2C-B)

Dashboard

Overall score: 0%

1 -

Question 96 of 156

□ □

A 85-year-old lady presents to her GP with patchy dysesthesia affecting her feet bilaterally. She doesn't complain of any back pain and there has been no change in her bowel habit. She has stress incontinence, but no recent change in her urinary symptoms. On examination there is no weakness and reflexes are preserved. Her past medical history includes hypertensive nephropathy and diet controlled type two diabetes. She takes amlodipine 10mg, ramipril 5mg and bendroflumethazide 2.5mg for her hypertension and for the last year nitrofurantoin 100mg as prophylaxis for urinary tract infections.

Na ⁺	135 mmol/l
K ⁺	4.2 mmol/l
Urea	10.8 mmol/l
Creatinine	186 µmol/l
Glucose	8.3 mmol/l

What is the most likely cause for her symptoms?

	Nitrofurantoin induced peripheral neuropathy
	Uraemic peripheral neuropathy
	Diabetic neuropathy
	B12 deficiency
	Thiazide induced peripheral neuropathy

Dashboard

Overall score: 0%

□ Question 96 of 156

□ □

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	Nitrofurantoin induced peripheral neuropathy
	Uraemic peripheral neuropathy
	Diabetic neuropathy
	B12 deficiency
	Thiazide induced peripheral neuropathy

Dashboard

Overall score: 0%

Question 97 of 156



A 42 year old caucasian man presents to his GP because of concerns about weight gain. He has put on 10kg in weight in the past 6 months but has been eating and exercising the same amounts for the past few years. The GP decides to do some further investigations and finds the following abnormalities. He tells you that he was on a medication for schizophrenia but this was changed one year ago due to abnormal movements. In the past year he has also been given medications to help with symptoms of nausea and has recently started medication for gynaecomastia.

Hb	13.8 g/dl
Platelets	$154 \times 10^9/l$
WBC	$3.8 \times 10^9/l$
Neuts	$1.5 \times 10^9/l$
Lymphs	$1.0 \times 10^9/l$
Eosinos	$1.2 \times 10^9/l$

Fasting glucose	11.9 mmol/l
Prolactin	264 mu/l

ECG: sinus rhythm 84/min QTC 462ms

Which drug is most likely to have caused these abnormalities?

	Haloperidol
	Clozapine
	Bromocriptine
	Domperidone

Dashboard

Overall score: **0%**

1 -

Question 97 of 156



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Which drug is most likely to have caused these abnormalities?

	Haloperidol
	Clozapine
	Bromocriptine
	Domperidone

Dashboard

Overall score: **0%**
1 -

Question 98 of 156

□ □

A 22-year-old, recently married woman presents to the first seizure clinic and is diagnosed with idiopathic generalised epilepsy. She tells you that she is keen to start a family soon. Which first line anti epileptic drug should be avoided?

	Levetiracetam
	Topiramate
	Lamotrigine
	Carbamazepine
	Valproate

Dashboard

Overall score: **0%**

1 -

Question 98 of 156

□ □

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	Levetiracetam
	Topiramate
	Lamotrigine
	Carbamazepine
	Valproate

Dashboard

Overall score: **0%**

1 -

Question 99 of 156

A 45 year old man is diagnosed with HIV following attendance at Genitourinary clinic.

As part of his routine HIV work up his HLA B*5701 result is reported as positive.

Which drug will not be included in his ART regimen as a result of this information?

	Tenofovir
	Emtricitabine
	Lamivudine
	Stavudine
	Abacavir

Dashboard

Overall score: **0%**

1 -

Question 99 of 156

□ □

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As part of his routine HIV work up his HLA B*5701 result is reported as positive.

Which drug will not be included in his ART regimen as a result of this information?

	Tenofovir
	Emtricitabine
	Lamivudine
	Stavudine
	Abacavir

Dashboard

Overall score: **0%**

1 -

Question 100 of 156

□ □

9. A 39 year old woman presents to her GP with symptoms of dysuria and increased urinary frequency for the past three days. She also complains of lower abdominal pain but has no overt signs of systemic sepsis. Examination is entirely normal aside from mild suprapubic pain. Urine dip correlates with a diagnosis of urinary tract infection with positive nitrites, leukocytes, blood and protein. The sample is sent for culture. The patients medical history is significant only for rheumatoid arthritis for which she takes methotrexate, folic acid, ibuprofen and omeprazole.

Which one of the following antibiotics is contraindicated in this patient?

	Co-amoxiclav
	Ciprofloxacin
	Cefpodoxime
	Nitrofurantoin
	Trimethoprim

Dashboard

Overall score: 0%

1 -

Question 100 of 156

□ □

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Which one of the following antibiotics is contraindicated in this patient?

	Co-amoxiclav
	Ciprofloxacin
	Cefpodoxime
	Nitrofurantoin
	Trimethoprim

Dashboard

Overall score: **0%**

1 -

Question 101 of 156

A 68-year-old gentleman presents acutely with a hot, red, swollen and painful right big toe. This has happened twice before, some years ago, and he has never sought medical attention. He has a raised serum urate level and joint fluid analysis demonstrates negatively birefringent needle-shaped crystals. Once symptoms settle he is started on allopurinol but develops a severe hypersensitivity reaction to this. Which agent should be tried next as a long-term treatment option?

<input type="checkbox"/>	Colchicine
<input type="checkbox"/>	Naproxen
<input type="checkbox"/>	Febuxostat
<input type="checkbox"/>	Methotrexate
<input type="checkbox"/>	Prednisolone

Dashboard

Overall score: **0%**

1 -

Question 101 of 156



A 68-year-old gentleman presents acutely with a hot, red, swollen and painful right big toe. This has happened twice before, some years ago, and he has never sought medical attention. He has a raised serum urate level and joint fluid analysis demonstrates negatively birefringent needle-shaped crystals. Once symptoms settle he is started on allopurinol but develops a severe hypersensitivity reaction to this. Which agent should be tried next as a long-term treatment option?

	Colchicine
	Naproxen
	Febuxostat
	Methotrexate
	Prednisolone

Dashboard

Overall score: **0%**

1 -

□ Question 102 of 156

□ □

A 22 year old woman is brought to the Emergency Department by ambulance. She is accompanied by her boyfriend who tells you he thinks she has taken a deliberate overdose of up to 80 fluoxetine tablets (20mg) within the past eight hours. On assessment her airway is patent but threatened with a respiratory rate of 26 and peripheral oxygen saturations of 97% on air. Her chest is clear. The heart rate is 118bpm and the blood pressure is 98/39mmHg. Capillary blood glucose is 5.0mmol/L. The ECG shows a sinus tachycardia with QRS duration 114msec and corrected QT interval 575msec. She is globally hypertonic, shivering, nauseated, vomiting and sweaty with a tympanic temperature of 37.7°C and dilated pupils and prominent clonus. She suddenly has a prolonged tonic-clonic seizure and receives 20mg intravenous diazepam with no response after 15 minutes.

Which of the following is the safest subsequent intervention in this patients management?

	Further 10mg intravenous diazepam
	10mg rectal diazepam
	Phenytoin infusion 20mg/kg
	Levetiracetam 1000mg intravenous infusion
	Intubate and ventilate

Dashboard

Overall score: 0%

1 -

Question 102 of 156

□ □

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	Levetiracetam 1000mg intravenous infusion
	Intubate and ventilate

Dashboard

Overall score: **0%**

1 -

□ Question 103 of 156



A 52-year-old male presents to the emergency department with a 5-week history of constipation not relieved by over the counter laxatives. His past medical history was significant for hypertension, COPD and schizophrenia. His current medications include ramipril, clozapine and tiotropium. He denied weight loss, poor appetite or other alarming symptoms. His family history was significant for bowel cancer with his father and uncle having died of colon cancer aged 78 and 82 respectively. His sister had a hysterectomy at the age of 72 but he was not sure why. On examination, his blood pressure was 124/78mmHg lying and 115/80mmHg standing. Pulse was 63/min. Clinical examination did not reveal any significant findings.

Investigations:

Hb	137 g/l
MCV	82 fl
Platelets	420 * 10 ⁹ /l
WBC	7 * 10 ⁹ /l
Creatinine	89 umol/L
Urea	4.7 umol/L
Na+	143 mmol/L
K+	3.9 mmol/L
Corrected Calcium	2.3mmol/L
FOB	negative
Abdominal X-ray	faecal loading

What is the most likely cause of constipation in this case?

	Clozapine

	Colon cancer
	Illicit drugs
	Dehydration
	Malingering

Dashboard

Overall score: **0%**
1 -

□ Question 103 of 156



A 52-year-old male presents to the emergency department with a 5-week history of constipation not relieved by over the counter laxatives. His past medical history was significant for hypertension, COPD and schizophrenia. His current medications include ramipril, clozapine and tiotropium. He denied weight loss, poor appetite or other alarming symptoms. His family history was significant for bowel cancer with his father and uncle having died of colon cancer aged 78 and 82 respectively. His sister had a hysterectomy at the age of 72 but he was not sure why. On examination, his blood pressure was 124/78mmHg lying and 115/80mmHg standing. Pulse was 63/min. Clinical examination did not reveal any significant findings.

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FOB	negative
Abdominal X-ray	faecal loading

What is the most likely cause of constipation in this case?

	Clozapine

	Colon cancer
	Illicit drugs
	Dehydration
	Malingering

Dashboard

Overall score: **0%**
1 -

A 52-year-old farmer was brought into the Emergency Department by his wife. Over the last few hours, he developed severe diarrhoea, passing 10 loose stools in the last four hours. He was also passing urine more frequently and on a couple of occasions was incontinent of urine. He also complained of feeling unwell with a headache and nausea and as well as a cough with white phlegm, and at times felt very short of breath particularly upon coughing. He denied the presence of chest pain. He had a past medical history of COPD, atrial fibrillation, depression and hypertension and his drug history comprised of Seretide 2puffs BD, salbutamol PRN, digoxin 250mcg OD, warfarin 2mg OD, sertraline 150mg OD, diazepam 2mg BD PRN and amlodipine 5mg OD.

Examination revealed the presence of an unwell and unkempt gentleman. His heart rate was 46 bpm and regular, his blood pressure was 88/48mmHG, his respiratory rate was 18, oxygen saturations 96% on air and temperature 35.7°C. His BM was 3.8 mmol/l. Examination of his cardiovascular system revealed the presence of warm well perfused peripheries with normal heart sounds and a JVP of 3cm. Examination of his respiratory system revealed the presence of copious upper airways secretions but the absence of respiratory distress. Examination of his gastrointestinal system revealed the presence of excess salivation but was otherwise unremarkable. Examination of his neurological system revealed the presence of bilateral pupil constriction but otherwise no abnormalities and a GCS of 15.

He was promptly transferred to the resuscitation area and cannulated with 2 large bore cannulae. Stat intravenous saline 3 litres were promptly infused and an urgent medical consult was requested. Initial investigations revealed the following:

Hb	140 g/l
Platelets	198 * 10 ⁹ /l
WBC	6.6 * 10 ⁹ /l
CRP	4 mg/l

Coagulation screen: INR 2.2, APTT and fibrinogen within normal limits

Portable chest x-ray: poor quality rotated film. Normal appearance of heart and lung fields.

ECG: sinus bradycardia heart rate 45bpm, normal sinus rhythm, normal QRS and QTc intervals, no acute ST/T changes

Arterial blood gases on air:

pH	7.33
PaO2	12.6 KPa
PaCO2	5.8 kPa
HCO3	18 mmol/l
BE	-4

Of the following options which is the most appropriate curative management step?

	Commence digoxin fragment binding antibody (Digibind)
	Commence broad spectrum intravenous antibiotics and instigate sepsis protocol
	Commence intravenous noradrenaline
	Commence intravenous flumazenil
	Commence intravenous atropine

Dashboard

Overall score: 0%

1 -

A 52-year-old farmer was brought into the Emergency Department by his wife. Over the last few hours, he developed severe diarrhoea, passing 10 loose stools in the last four hours. He was also passing urine more frequently and on a couple of occasions was incontinent of urine. He also complained of feeling unwell with a headache and nausea and as well as a cough with white phlegm, and at times felt very short of breath particularly upon coughing. He denied the presence of chest pain. He had a past medical history of COPD, atrial fibrillation, depression and hypertension and his drug history comprised of Seretide 2puffs BD, salbutamol PRN, digoxin 250mcg OD, warfarin 2mg OD, sertraline 150mg OD, diazepam 2mg BD PRN and amlodipine 5mg OD.

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Dashboard
Overall score: 0% 1 -

Question 105 of 156

□ □

A 45-year-old gentleman is advised by his GP to attend hospital following a routine blood test demonstrating an increase in creatinine two weeks following a dose increase in his ramipril. His ramipril was increased from 5mg daily to 5mg twice a day.

He has a letter which demonstrates investigation results, shown below. He reports no new symptoms. He reports that home monitoring of blood pressure has shown his control to be better.

	21/11/2016	6/11/2016
Na ⁺	140 mmol/l	138 mmol/l
K ⁺	4.5 mmol/l	4.1 mmol/l
Urea	5.5 mmol/l	5.4 mmol/l
Creatinine	110 µmol/l	92 µmol/l

How should his ramipril be managed and monitored?

	Continue ramipril and repeat U&Es in 1-2 weeks
	Reduced the dose of ramipril and repeat U&Es in 1-2 weeks
	Stop ramipril and repeat U&Es in 1-2 weeks
	Stop ramipril and arrange for an urgent out-patient imaging to exclude renal artery stenosis
	Continue ramipril and repeat U&Es within 48 hours

Dashboard

Overall score: 0%

Question 105 of 156

□ □

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Question 105 of 156

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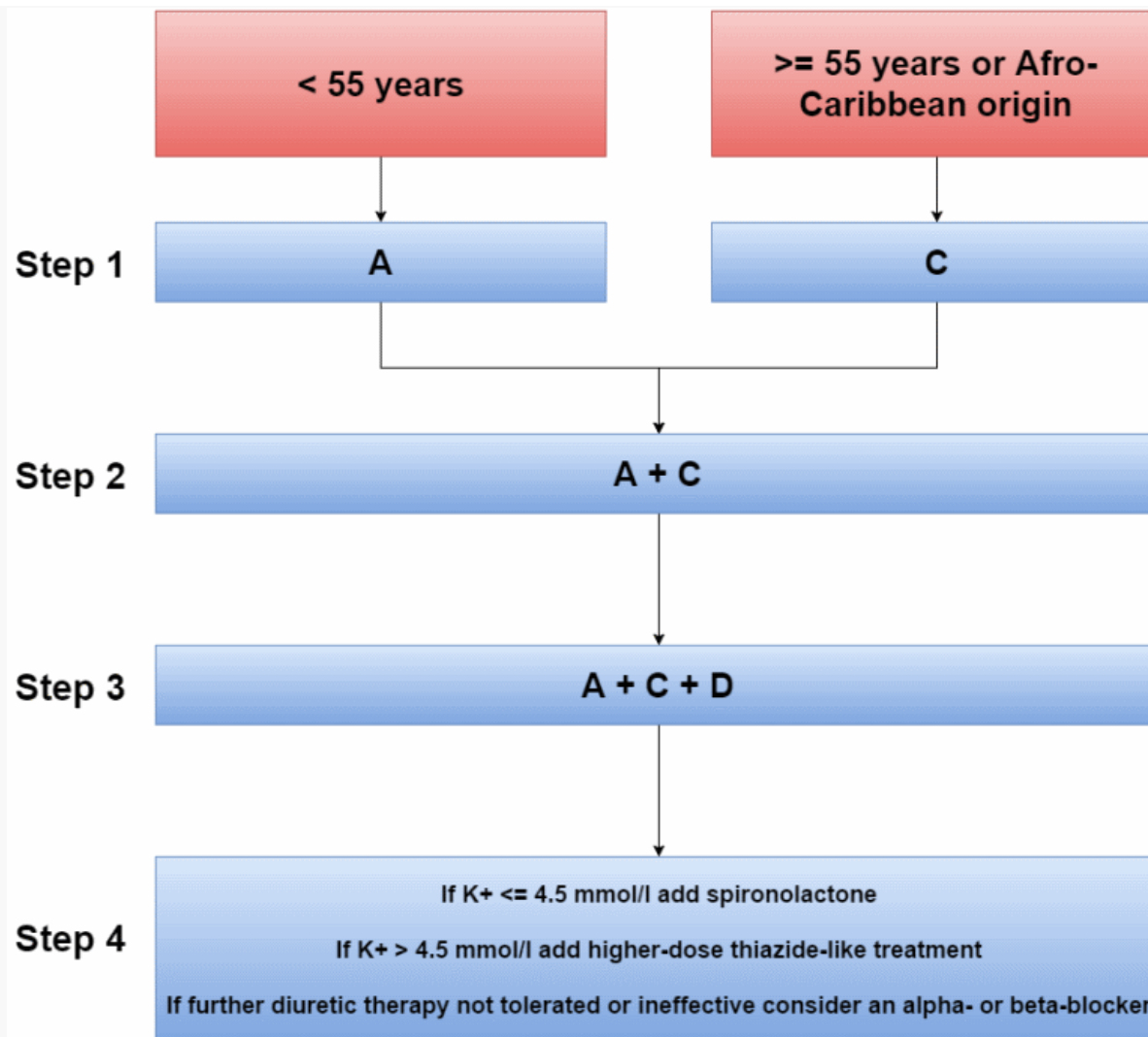
	21/11/2016	6/11/2016
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	Stop ramipril and arrange for an urgent out-patient imaging to exclude renal artery stenosis
	Continue ramipril and repeat U&Es within 48 hours

Dashboard

Overall score: 0%



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Key

A = ACE inhibitor

C = Calcium channel blocker

D = Thiazide Diuretic

Question 106 of 156

□ □

A 53-year-old gentleman is reviewed in clinic due to abnormal blood tests. He has a past medical history of hypertension, type two diabetes, obesity, and depression. He started taking atorvastatin two months ago due to a routine assessment of QRISK and elevated cholesterol levels. He had a blood test as requested at three months following the start of treatment.

These shows that his alanine aminotransferase have increased from 28iU/L to 94iU/L. Other blood tests have remained within normal ranges apart from cholesterol which as improved from 5.4mmol/L to 4.9mmol/L.

How should his atorvastatin treatment be managed?

	Stop atorvastatin and repeat LFT within 4-6 weeks
	Continue atorvastatin and repeat LFT within 4-6 weeks
	Change atorvastatin to simvastatin
	Investigate for elevated creatinine kinase
	Stop atorvastatin and arrange for an urgent abdominal ultrasound

Dashboard

Overall score: 0%

1 -

□ Question 106 of 156

□ □

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	Change atorvastatin to simvastatin
	Investigate for elevated creatinine kinase
	Stop atorvastatin and arrange for an urgent abdominal ultrasound

Dashboard

Overall score: **0%****1** -

Question 106 of 156

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These shows that his alanin within normal ranges apart f

How should his atorvastatin

	Stop atorvastatin a
	Continue atorvasta
	Change atorvastatin to simvastatin
	Investigate for elevated creatinine kinase
	Stop atorvastatin and arrange for an urgent abdominal ultrasound

Primary prevention

(10-year cardiovascular risk $\geq 10\%$ OR
most type 1 diabetics OR
CKD if eGFR $< 60\text{ml/min/m}^2$)



Atorvastatin 20mg od

(if non-HDL has not fallen by $\geq 40\%$ then
consider titrating up to 80mg)

(kn

Dashboard

Overall score: 0%

1 -

Question 107 of 156

□ □

A 57-year-old man attends neurology clinic. He has recently been diagnosed with Parkinson's disease and has agreed to start treatment with cabergoline as monotherapy. He has had a full examination, lung function tests, routine blood tests, chest X-ray and an echocardiogram.

Apart from a clinical review, what investigation is most important to arrange regularly to monitor for complications?

<input type="checkbox"/>	Chest X-ray
<input type="checkbox"/>	FBC
<input type="checkbox"/>	U&E
<input type="checkbox"/>	Echocardiogram
<input type="checkbox"/>	LFT

Dashboard

Overall score: 0%

1 -

Question 107 of 156

□ □

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	Chest X-ray
	FBC
	U&E
	Echocardiogram
	LFT

Dashboard

Overall score: **0%**

1 -

Question 108 of 156

□ □

A 25-year-old female was admitted to the emergency department following an overdose of unknown tablets 4 hours ago. Her past medical history includes depression, previous overdoses and gastric ulcer disease. On examination, she was drowsy but easily rousable with a Glasgow Coma Score of 14. She has a heart rate of 112 beats per minute, blood pressure of 106/60mmHg, respiratory rate of 22 and saturations of 96% on air.

Electrocardiogram shows a sinus tachycardia with QRS complexes measuring 160 ms.

An arterial blood gas on air revealed the following results:

pH	7.29
pCO ₂	6.2 kPa
pO ₂	10.5 kPa
HCO ₃ ⁻	18 mmol/l
BE	-6.6 mmol/l

Which of the following management is the most appropriate?

	Intravenous magnesium
	Activated charcoal
	Gastric lavage
	Sodium bicarbonate
	5% dextrose infusion

Overall score: **0%**

1 -

Question 108 of 156

□ □

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	Activated charcoal
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	Sodium bicarbonate
	5% dextrose infusion

Overall score: **0%**

1 -

Question 109 of 156

□ □

A 56 year old gardener is brought to the Emergency Department by his wife. He was bitten on the right hand by a snake while clearing bushes in his back garden. It is identified as a common European adder. There is an obvious, red puncture site on the dorsum of the right hand with significant swelling of the entire hand to the level of the wrist. He is in significant discomfort. Examination reveals a normal cardiovascular examination with a heart rate of 112bpm, blood pressure of 137/90mmHg and normal respiratory rate and oxygen saturations. Capillary glucose is 5.6mmol. ECG shows normal sinus rhythm with normal PR, QRS and QT intervals. Routine blood tests including liver function, electrolytes, creatine kinase, full blood count and arterial blood gases are normal.

Which of the following interventions is the most appropriate at this stage?

	Application of a tourniquet above the site of envenomation to prevent systemic toxicity
	Bathe the site of envenomation in hot, sterile water to inactivate the venom
	Intravenous access and rapidly infuse 0.9% sodium chloride with 1g intravenous paracetamol
	Intravenous access and administer 200mg IV hydrocortisone, 10mg IV chlorphenamine and 0.5mg IM adrenaline 1:1000
	Intravenous access and administer 10ml adder antivenin in 500ml 0.9% sodium chloride over 30 minutes

Dashboard

Overall score: 0%

1 -

Question 109 of 156

□ □

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	Intravenous access and administer 10ml adder antivenin in 500ml 0.9% sodium chloride over 30 minutes

Dashboard

Overall score: **0%**

1 -

Question 110 of 156

□ □

A 65-year-old gentleman presents with a chronic cough. He has noticed a productive cough for several months with a few episodes of mild haemoptysis. He has also noticed mild weight loss and night sweats. He has traveled to India several time during the year. A sputum sample is positive for acid-fast bacilli. Before starting treatment, what examination should he be assessed for?

	Visual acuity
	Hearing
	Sense of smell
	Sense of taste
	Eye movements

Dashboard

Overall score: **0%**

1 -

Question 110 of 156

□ □

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	Visual acuity
	Hearing
	Sense of smell
	Sense of taste
	Eye movements

Dashboard

Overall score: **0%**

1 -

Question 111 of 156

□ □

A 70-year-old man with hypertension and previous myocardial infarction 3 years ago presents to his GP with a 2 day history of a painful vesicular rash over his left chest and back. It is well demarcated and confined to the T6 dermatology. His GP diagnoses shingles and prescribes pain relief. His rash resolves gradually over the next 2 weeks.

Four weeks later the man develops chest pain on the left side which is stabbing in shooting in nature. He attends the Emergency Department. On examination his blood pressure is heart rate is 50/min and blood pressure is 154/96 mmHg. His oxygen saturations on room air 98%.

His investigations results were as follows:

Chest x-ray: No abnormalities.

ECG: 50/min. PR interval 230 milliseconds. QRS interval 110 milliseconds. 5 millimetre Q waves in the inferior leads. Normal T wave and ST segments.

His d-dimer and 12 hour troponin are both normal.

Which analgesic agent is contraindicated?

	Amitriptyline
	Duloxetine
	Gabapentin
	Oxycodone
	Pregabalin

Overall score: **0%**

1 -

Question 111 of 156

□ □

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	Amitriptyline
	Duloxetine
	Gabapentin
	Oxycodone
	Pregabalin

Overall score: **0%**

1 -

Question 112 of 156

□ □

A 35-year-old farmer who is in financial difficulties presents to the Emergency department some 40 minutes after taking an unknown amount of paraquat-based weed killer. On arrival in the Emergency department, he has a Glasgow coma scale score of 15 and tells you he regrets what he has done. He feels sick and says there is a burning sensation in his mouth. On examination his blood pressure is 135/80 mmHg, his pulse is 85 beats per minute and regular. There are no abnormal physical signs. Which of the following is the most important intervention?

	Administration of emetic
	Gastric lavage
	IV normal saline
	IV sodium bicarbonate
	Oral fuller's earth

Dashboard

Overall score: 0%

1 -

Question 112 of 156

□ □

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	Gastric lavage
	IV normal saline
	IV sodium bicarbonate
	Oral fuller's earth

Dashboard

Overall score: **0%**

1 -

Question 113 of 156

□ □

A 68-year-old lady, who is a retired teacher, is admitted with lightheadedness. She has a history relevant for depression, osteoarthritis and sciatica. Her medication history includes codeine 30mg QDS, ibuprofen 400mg TDS, pregabalin 50mg TDS and amitriptyline 100mg ON. She is also on nitrofurantoin 50mg OD for recurrent urinary tract infections. Electrocardiogram (ECG) confirms normal sinus rhythm with a heart rate of 80bpm. There are no dynamic ST/T changes. PR interval is 140ms and QTc is prolonged at 526ms.

Which medication is most likely to be implicated?

	Nitrofurantoin
	Pregabalin
	Amitriptyline
	Ibuprofen
	Codeine

Dashboard

Overall score: 0%

1 -

Question 113 of 156

□ □

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	Pregabalin
	Amitriptyline
	Ibuprofen
	Codeine

Dashboard

Overall score: **0%**

1 -

□ Question 114 of 156

□ □

A 62-year-old woman is reviewed prior to discharge by the medical team. She was admitted with a lower respiratory tract infection. She now feels well and is ready for discharge. She has a background of type two diabetes mellitus, hypertension, hypothyroidism, osteoarthritis and dementia. Her medication history includes metformin 500mg BD, ramipril 2.5mg OD, levothyroxine 75g OD and paracetamol 500mg QDS PRN. On the first two days in hospital, her metformin was stopped, but her other medications continued as in the community during her admission.

It is noted that she has persistently high blood pressure despite being confirmed as taking ramipril. What is the most appropriate plan to control her hypertension?

	Increase the dose of ramipril and check U&Es within 1-2 weeks
	Increase the dose of ramipril and check U&Es within 3-4 weeks
	Add amlodipine, increase the dose of ramipril and check U&Es within 3-4 weeks
	Add on amlodipine at a low dose
	Stop ramipril and start amlodipine instead

Dashboard

Overall score: 0%

1 -

Question 114 of 156

□ □

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1 -

□ Question 114 of 156

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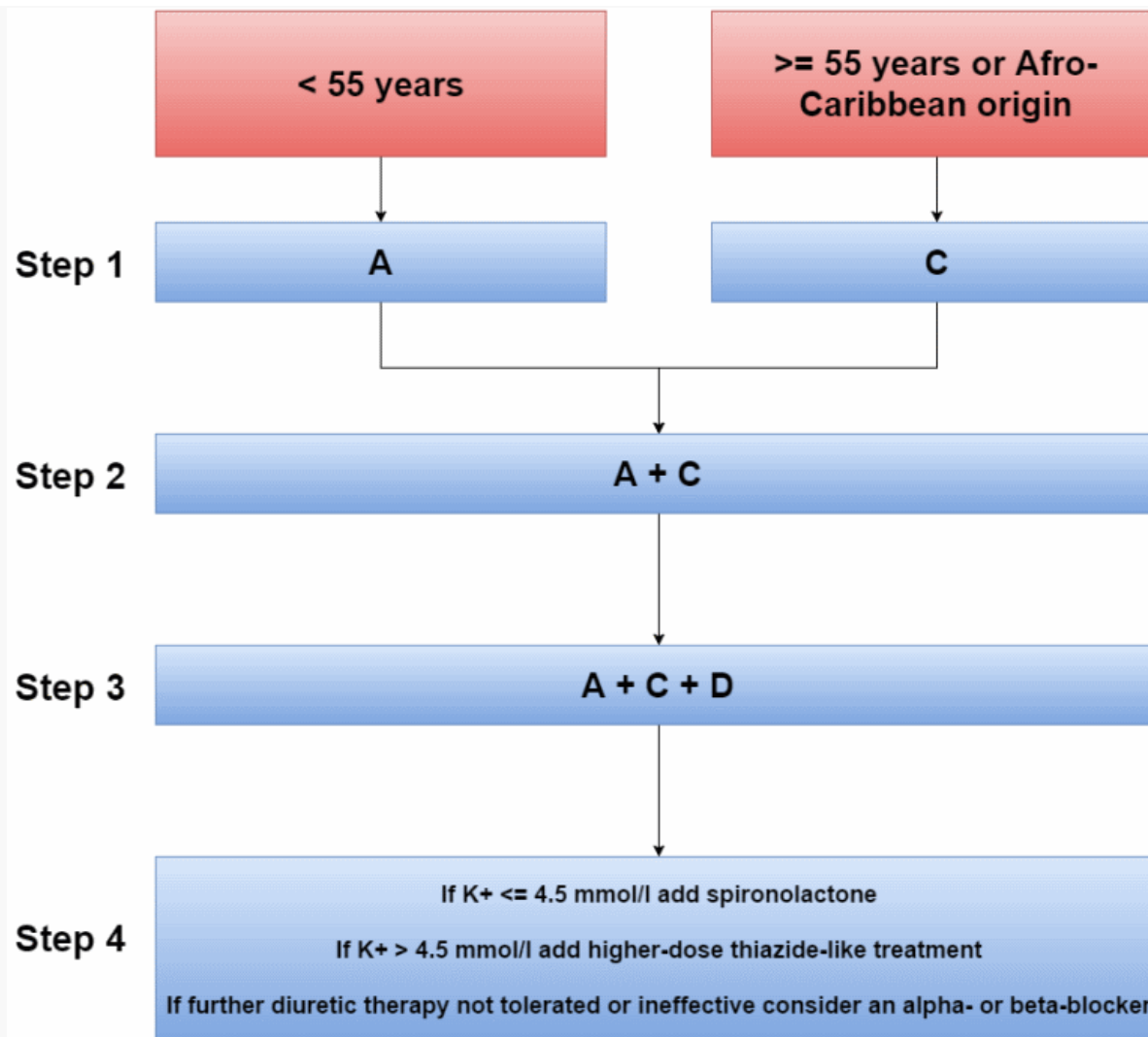
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	Stop ramipril and start amlodipine instead

Dashboard

Overall score: 0%

1 -



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Key

A = ACE inhibitor

C = Calcium channel blocker

D = Thiazide Diuretic

Question 115 of 156

□ □

An 18-year-old female presents with collapse. Her bloods show-

Hb	112 g/l
Platelets	$324 \times 10^9/l$
WBC	$4.2 \times 10^9/l$
Na ⁺	130 mmol/l
K ⁺	2.4 mmol/l
Urea	8.9 mmol/l
Creatinine	109 μ mol/l
CRP	0.5 mg/l

Her blood pressure is 77/38 mmHg and heart rate 121 beats per minute. Her only past medical history is anorexia and self-harm and she is minimally cooperative with any attempt at a history or examination.

Which of these is the most likely cause for her presentation?

	Pseudohypoaldosteronism
	Familial hyperaldosteronism type 1
	Addison's disease
	Furosemide abuse
	Aldosterone-producing adenoma

Overall score: **0%**

1 -

Question 115 of 156



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Overall score: **0%**

1 -

Question 116 of 156

□ □

A 53 year old patient has undergone six cycles of R-CHOP (rituximab, cyclophosphamide, doxorubicin, vincristine and prednisolone) chemotherapy and is now attending the lymphoma follow up clinic. He complains of an ongoing and unrelenting tingling in his feet and legs as well as his right hand. This is associated with pain in the extremities that is worsened by the cold weather.

Examination reveals normal motor strength throughout all 4 limbs but marked reduction in proprioception in both legs below the knee and also the right hand. There is a 'glove and stocking' distribution of loss when tested for pin-prick sensation and a reduced joint position sense to the ankle in both lower limbs. Plantar reflexes are normal. During the examination you it is noted that the patient has sustained an injury to the sole of foot which he was unaware of.

What is the most likely causative agent for these symptoms?

	Rituximab
	Cyclophosphamide
	Doxorubicin
	Vincristine
	Prednisolone

Dashboard

Overall score: 0%

1 -

Question 116 of 156

□ □

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	Cyclophosphamide
	Doxorubicin
	Vincristine
	Prednisolone

Dashboard

Overall score: **0%**

1 -

Question 117 of 156

A 29 year old man is brought to the Emergency Department by ambulance after being found collapsed at home by his father. The patient had a known history of major depression and was found next to two empty bottles of fluoxetine which he had been prescribed by his psychiatrist. His father reported that he had found a suicide note at the patients home.

On arrival in hospital the patient was extremely agitated and unable to give a clear history. Initial assessment was as documented below.

Airway

- Patient's own

Breathing

- Respiratory rate 28
- Some increased work of breathing
- O2 saturation 100 % (10 L via non-rebreath mask)
- Air entry throughout chest with vesicular breath sounds

Circulation

- BP 190 / 100 mmHg
- HR 120 bpm, pulse regular
- JVP not elevated
- Heart sounds normal

Disability

- Temperature 38.4°C
- Flushed and sweaty
- Patient agitated and distressed
- Pupils equal and reactive
- Rapid, involuntary horizontal and vertical conjugate fast eye movements
- Good power in all arms and legs 10 beats of clonus on ankle dorsiflexion, mild increase in general muscle tone Reflexes very brisk and symmetrical in arms and legs

Exposure

- Abdomen soft and non-tender

Results from arterial blood sample (10 L O₂) were as follows

pH	7.35
PaCO ₂	30 mmHg (reference 32-43)
PaO ₂	159 mmHg (reference 70-100)
Bicarbonate	22.5 mmol / L (reference 20.0-26.0)
Sodium	139 mmol / L
Potassium	4.5 mmol / L
Lactate	2 mmol / L

Electrocardiogram: sinus rhythm at 125 bpm, normal axis, normal QRS, no acute ST / T wave changes

Portable chest x-ray: clear lung fields, no pneumothorax, no rib fractures

Treatment with intravenous fluids and oral diazepam was initiated following primary assessment. A fan was used to help cool the patient. On review 30 minutes later, the patient remained agitated and distressed with persistent clonus and uncontrolled eye movements only slightly improved to previous assessment. Temperature was 38.1 oC

What is appropriate next line treatment for this patient?

	Intravenous chlorpromazine
	Oral cyproheptadine
	Intubation and ventilation
	Further oral diazepam
	Cooling blanket

Dashboard

Overall score: **0%**

1 -

Question 117 of 156

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Dashboard

Overall score: **0%**

1 -

Question 118 of 156

□ □

A 22-year-man has presented with a bilateral tight non-pulsating headache which he has had for the past 2 weeks. Each episode lasts approximately 30minutes. He cannot think of any relieving or aggravating factors and has been otherwise well. He specifically denies any neck stiffness, photophobia or fevers. He is requesting analgesia. Which of the following is the best option for this man?

	Triptan
	Codeine
	Topiramate
	Propranolol
	Aspirin

Dashboard

Overall score: 0%

1 -

Question 118 of 156

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	Codeine
	Topiramate
	Propranolol
	Aspirin

Dashboard

Overall score: **0%**

1 -

□ Question 119 of 156

□ □

A 63 year old farmer is brought to the Emergency Department after falling into a trough of organophosphate sheep dip. On arrival in the department he is in extremis with profuse vomiting and productive of copious respiratory secretions. His airway is threatened but he is also agitated and difficult to assess. Respiratory rate is 20 breaths per minute and oxygen saturations are 87% on 4L/min oxygen. Wheeze is audible from the end of the bed. The heart rate is 55bpm and the blood pressure is 92/44mmHg. Heart sounds are normal. He is incontinent of urine and faeces and has severe abdominal pain. There is widespread muscle fasciculation and global weakness. Pupils are pinpoint.

Which of the following best describes the toxic action of organophosphate compounds?

	Adrenergic blockade due to competitive inhibition of α 1, α 2, β 1 and β 3 receptors
	Adrenergic upregulation due to inhibition of monoamine oxidase
	Cholinergic upregulation due to inhibition of acetylcholinesterase
	Cholinergic upregulation due to direct activation at muscarinic M1, M2 and M3 receptors
	Cholinergic upregulation due to direct activation at nicotinic CNS and muscle receptors

Dashboard

Overall score: 0%

1 -

□ Question 119 of 156

□ □

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	Cholinergic upregulation due to direct activation at nicotinic CNS and muscle receptors

Dashboard

Overall score: **0%**

1 -

Question 120 of 156

□ □

A 48-year-old female presented with general fatigue, and nausea. She denies having pyrexia, vomiting diarrhoea or any pains. She appeared dehydrated but otherwise, observations and physical examination were within normal limits.

Blood results are as follows:

Na ⁺	130 mmol/l
K ⁺	4.8 mmol/l
Urea	18 mmol/l
Creatinine	162 µmol/l
Lithium	1.6 mmol/l (0.4-1.0 mmol/l)

Looking back at past results from 3 weeks ago, her renal function was in the normal range.

She has a history of bipolar disorder, diet-controlled diabetes and hypertension. She has been compliant with her lithium tablets and undergoing regular checks for the levels.

The patient revealed that her General Practitioner had recently started her on a new tablet 2 weeks ago.

Which of the following would most likely be the precipitant for her symptoms?

	Indapamide
	Amlodipine
	Dihydrocodeine
	Spironolactone
	Propranolol

Dashboard

Overall score: **0%**

1 -

Question 120 of 156

□ □

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	Amlodipine
	Dihydrocodeine
	Spironolactone
	Propranolol

Dashboard

Overall score: **0%**

1 -

Question 121 of 156

□ □

A 67 year old man is admitted to the Emergency Department following a deliberate overdose of an unknown drug. On assessment he is unwell and vomiting although he is maintaining an airway. Oxygen saturations are 100% on 15L/min supplemental oxygen and his respiratory rate is 32/min. His chest is clear and heart sounds are rapid. An ECG shows sinus tachycardia with a rate of 135bpm, a broad QRS complex and a QTc 520msec. His skin is flushed and hot. He complains of ringing in his ears and visual blurring as well as abdominal pain. Tympanic temperature is 37.5°C.

Blood results show:

Haemoglobin	101g/L	Sodium	131mmol/L	pH	7.11
White cells	$7.8 \times 10^9/L$	Potassium	2.9mmol/L	pCO ₂	2.4kPa
Platelets	$97 \times 10^9/L$	Urea	9.3mmol/L	pO ₂	78.4kPa
INR	1.3	Creatinine	198μmol/L	HCO ₃ ⁻	6.3mmol/L
APTT	33secs	Glucose	2.8mmol	BE	-19.7
		Chloride	94mmol/L	Lactate	2.4mmol/L

During assessment he has a generalised tonic-clonic seizure.

Which of the following drugs is he most likely to have overdosed on?

	Ibuprofen
	Isocarboxazid
	Paracetamol
	Quinine
	Venlafaxine

Dashboard

Overall score: **0%**

1 -

□ Question 121 of 156

□ □

A 67 year old man is admitted to the Emergency Department following a deliberate overdose of an unknown drug. On assessment he is unwell and vomiting although he is maintaining an airway. Oxygen saturations are 100% on 15L/min supplemental oxygen and his respiratory rate is 32/min. His chest is clear and heart sounds are rapid. An ECG shows sinus tachycardia with a rate of 135bpm, a broad QRS complex and a QTc 520msec. His skin is flushed and hot. He complains of ringing in his ears and visual blurring as well as abdominal pain. Tympanic temperature is 37.5°C.

Blood results show:

Haemoglobin	101g/L	Sodium	131mmol/L	pH	7.11
White cells	$7.8 \times 10^9/L$	Potassium	2.9mmol/L	pCO ₂	2.4kPa
Platelets	$97 \times 10^9/L$	Urea	9.3mmol/L	pO ₂	78.4kPa
INR	1.3	Creatinine	198μmol/L	HCO ₃ ⁻	6.3mmol/L
APTT	33secs	Glucose	2.8mmol	BE	-19.7
		Chloride	94mmol/L	Lactate	2.4mmol/L

During assessment he has a generalised tonic-clonic seizure.

Which of the following drugs is he most likely to have overdosed on?

	Ibuprofen
	Isocarboxazid
	Paracetamol
	Quinine
	Venlafaxine

Dashboard

Overall score: **0%**

1 -

Question 122 of 156

□ □

An 82-year-old man presents with pain following a fall. He was brought in by ambulance after he slipped and hurt himself on the pavement. He ended up tripping whilst returning from the local shops. He remembers his fall and noted immediate pain in his right leg, and was unable to get up. A passerby called an ambulance and he was brought into the hospital. He has a past medical history of ischaemic heart disease, mild dementia, hypertension and high cholesterol.

Pelvic X-rays demonstrated an intertrochanteric right hip fracture. He is due to be operated on within the five hours and is put nil by mouth and started on IV fluids. How should his risk of venous thromboembolism (VTE) be managed?

	Low molecular weight heparin before surgery
	Unfractionated heparin before surgery
	Delay VTE prophylaxis until following surgery
	Mechanical VTE prophylaxis before surgery
	IV heparin infusion until surgery

Dashboard

Overall score: 0%

1 -

Question 122 of 156

□ □

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	Unfractionated heparin before surgery
	Delay VTE prophylaxis until following surgery
	Mechanical VTE prophylaxis before surgery
	IV heparin infusion until surgery

Dashboard

Overall score: **0%**

1 -

Question 123 of 156

□ □

A 70 year old woman is brought by ambulance to the Emergency Department after being found unresponsive by her husband. He reported that he had been unable to wake the patient from sleep that morning. He said that she had been previously very well without significant physical medical problems. Her only regular medication was moclobemide which she had taken for many years after an episode of severe depression. The patients husband had recently been prescribed fluoxetine for an anxiety disorder, although the patient had also been taking this medication for a few days as she felt her mood had been low.

Initial assessment in hospital showed the patient to be extremely unwell with hypertension (blood pressure 190/110 mmHg). and tachycardia (heart rate 130 bpm). She was minimally responsive with severe rigidity of skeletal muscles. Temperature was recorded as exceeding 40°C.

An urgent anaesthetic review was requested and the patient was intubated and ventilated prior to transfer to the intensive care unit. A plan was made for treatment with IV chlorpromazine.

What action is necessary prior to IV chlorpromazine treatment?

	Intravenous midazolam infusion
	Cardiac monitoring
	Active cooling with ice packs
	Intravenous fluid loading
	Haemodialysis

Dashboard

Overall score: 0%

1 -

Question 123 of 156

□ □

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	Cardiac monitoring
	Active cooling with ice packs
	Intravenous fluid loading
	Haemodialysis

Dashboard

Overall score: **0%**

1 -

Question 124 of 156

□ □

A 45-year-old gentleman is admitted to the psychiatry ward with a two day history of visual hallucinations. His past medical history is relevant for renal transplant last year, indicated because of membranous glomerulonephritis. He is on an established regime of immunosuppressants.

On examination, there is no evidence of focal neurology. Cranial nerves I to XII are normal, with equal and reactive pupils. There are no cerebellar signs. Plantars are equivocal on the left and downgoing on the right. Abbreviated mental test score (AMTS) is 8/10. An urgent CT head is unremarkable.

Which medication may be implicated as a cause of this patient's presentation?

	Mycophenolate mofetil
	Azathioprine
	Prednisolone
	Tacrolimus
	Ciclosporin

Dashboard

Overall score: 0%

1 -

Question 124 of 156

□ □

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	Azathioprine
	Prednisolone
	Tacrolimus
	Ciclosporin

Dashboard

Overall score: **0%**

1 -

Question 125 of 156

□ □

A 59- year- old male presented with palpitations, excessive sweating and weight loss for two months. Two years ago he was diagnosed with atrial fibrillation and commenced on amiodarone.

On examination, his pulse rate is 80 beats per minute, irregularly irregular, and his blood pressure is 135/80. There was no goitre, no eye signs or hand signs.

Investigations reveal:

Serum free T4	60 pmol/l
Serum free T3	15 pmol/l (5 - 10)
Serum TSH	<0.05 mU/l
Serum antithyroid peroxidase	negative
TSH receptor antibodies	negative

Radioactive iodine uptake scan showed reduced uptake by the thyroid gland.

What is the most appropriate management for this patient?

	Discontinue amiodarone and give carbimazole
	Discontinue amiodarone and give potassium perchlorate
	Discontinue amiodarone and give prednisolone
	Radioactive iodine
	Total thyroidectomy

Overall score: **0%**

1 -

Question 125 of 156

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<input checked="" type="checkbox"/>	Discontinue amiodarone and give prednisolone
<input type="checkbox"/>	Radioactive iodine
<input type="checkbox"/>	Total thyroidectomy

Dashboard

Overall score: **0%**

1 -

Question 126 of 156

You are asked to review a patient on the ward who the nurse feels is looking very flushed. The nurse noticed the change in the patient whilst they were receiving their first dose of vancomycin. On examination the patient has no symptoms or signs of cardiorespiratory distress. Observations are as follows:

Temperature 37.2 °c
 Respiratory rate 18 breaths/min
 Saturations on air 97%
 Heart rate 70 beats/min
 Blood Pressure 136/72 mmHg

A blanching macular rash is evident on the patient's upper arms and upper thighs. No signs of urticaria or excoriations. The patient is penicillin allergic.

What is your next step?

<input type="radio"/>	Measure mast cell tryptase levels
<input type="radio"/>	Stop the infusion, give the patient piriton and hydrocortisone
<input type="radio"/>	Stop the infusion and give the patient piriton, hydrocortisone, adrenaline
<input type="radio"/>	Continue the infusion but slow it down and give the patient piriton
<input type="radio"/>	Stop the infusion, do not give any further treatment but discuss an alternative antibiotic with microbiology

Dashboard

Overall score: 0%

1 -

Question 126 of 156

□ □

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	Continue the infusion but slow it down and give the patient piriton
	Stop the infusion, do not give any further treatment but discuss an alternative antibiotic with microbiology

Dashboard

Overall score: **0%**

1 -

Question 127 of 156

□ □

A 5-year-old is brought to the emergency department by her pregnant mother, she found the child eating her pregnancy multivitamins. She doesn't know how many she has taken. The child is completely well. The mother is concerned about iron poisoning, which of the following is an indication for deferoxamine?

	Pills visible on abdominal radiograph
	Resolved abdominal pain
	Serum iron 60ug/dL
	Abnormal liver function test
	Metabolic alkalosis

Dashboard

Overall score: 0%

1 -

Question 127 of 156

□ □

A 5-year-old is brought to the emergency department by her pregnant mother, she found the child eating her pregnancy multivitamins. She doesn't know how many she has taken. The child is completely well. The mother is concerned about iron poisoning, which of the following is an indication for deferoxamine?

	Pills visible on abdominal radiograph
	Resolved abdominal pain
	Serum iron 60ug/dL
	Abnormal liver function test
	Metabolic alkalosis

Dashboard

Overall score: **0%**

1 -

Question 128 of 156

□ □

A 55-year-old man presents to the Emergency Department after taking an overdose. He can not tell you which of his regular tablets he has taken an overdose of. His past medical history includes Crohn's disease, gastroesophageal reflux disease, hypertension, gout, depression and paroxysmal atrial fibrillation.

He is complaining of chest pain and shortness of breath. Observations - respiratory rate 26/min, saturations 94% on air, heart rate 50/min, blood pressure 75/40 mmHg, temperature 37.2°C.

His ECG shows atrial fibrillation with a broad QRS.

Which drug is the most likely culprit?

	Flecainide
	Amitriptyline
	Allopurinol
	Azathioprine
	Diltiazem

Dashboard

Overall score: 0%

1 -

Question 128 of 156

□ □

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	Flecainide
	Amitriptyline
	Allopurinol
	Azathioprine
	Diltiazem

Dashboard

Overall score: **0%**

1 -

Question 129 of 156

A 48 year old male patient with a history of type 2 diabetes mellitus, angina and atrial fibrillation presents to clinic for a routine review. His main concern is new-onset erectile dysfunction and he asks you about whether or not he can use sildenafil. Which of his medications represents an absolute contra-indication to its use?

	Warfarin
	Ramipril
	Nicorandil
	Sitagliptin
	Aspirin

Dashboard

Overall score: 0%

1 -

Question 129 of 156

□ □

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	Ramipril
	Nicorandil
	Sitagliptin
	Aspirin

Dashboard

Overall score: **0%**

1 -

□ Question 130 of 156

□ □

A 23-year-old male is brought to the ED via ambulance after a seizure. His friends reported an episode of jerking of all four limbs lasting 1-2 minutes associated with urinary incontinence.

He has vomited twice in the ED and is complaining of muscle aches.

On examination the patient is agitated, confused and appears to be hallucinating. Myoclonic jerks are present. The chest is clear to auscultation and oxygen saturations are 98% on room air. Heart sounds are normal, the pulse rate is 130bpm and the blood pressure is 161/84mmHg.

An ECG reveals sinus tachycardia. The pupils measure 8mm and are equal and reactive. The patient's temperature is 36.6°C.

Blood tests reveal:

Hb	138 g/l
Platelets	362 * 10 ⁹ /l
WBC	11.2 * 10 ⁹ /l
Na ⁺	135 mmol/l
K ⁺	2.7 mmol/l
Urea	12.6 mmol/l
Creatinine	187 µmol/l
Bilirubin	18 µmol/l
ALP	98 u/l
ALT	53 u/l
γGT	27 u/l
Albumin	32 g/l

What is the most likely cause for this patient's presentation?

	Toluene solvent toxicity
	Amyl nitrate toxicity
	Gamma hydroxybutyric acid toxicity
	Synthetic cannabinoid toxicity
	Heroin toxicity

Dashboard

Overall score: 0%

1 -

□ Question 130 of 156

□ □

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	Heroin toxicity

Dashboard

Overall score: **0%**
1 -

Question 131 of 156

□ □

A 75-year-old man presents with slowly progressive dyspnoea. There is no cough or chest pain. He is a non-smoker with a background of Parkinson's disease, rheumatoid arthritis, type 2 diabetes mellitus and atrial fibrillation. Peak flow investigations demonstrate a reduced Forced Vital Capacity (FVC), a Forced Expiratory Volume (FEV1):FVC ratio of 90%, and a low transfer factor for carbon monoxide (TLCO). High-resolution CT confirms ground-glass changes. Which of his following medications is the most likely contributor to his lung-changes?

	Azathioprine
	Levodopa
	Digoxin
	Cabergoline
	Exenatide

Dashboard

Overall score: **0%**

1 -

□ Question 131 of 156

□ □

A 75-year-old man presents with slowly progressive dyspnoea. There is no cough or chest pain. He is a non-smoker with a background of Parkinson's disease, rheumatoid arthritis, type 2 diabetes mellitus and atrial fibrillation. Peak flow investigations demonstrate a reduced Forced Vital Capacity (FVC), a Forced Expiratory Volume (FEV1):FVC ratio of 90%, and a low transfer factor for carbon monoxide (TLCO). High-resolution CT confirms ground-glass changes. Which of his following medications is the most likely contributor to his lung-changes?

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Dashboard

Overall score: **0%****1** -

□ Question 131 of 156

□ □

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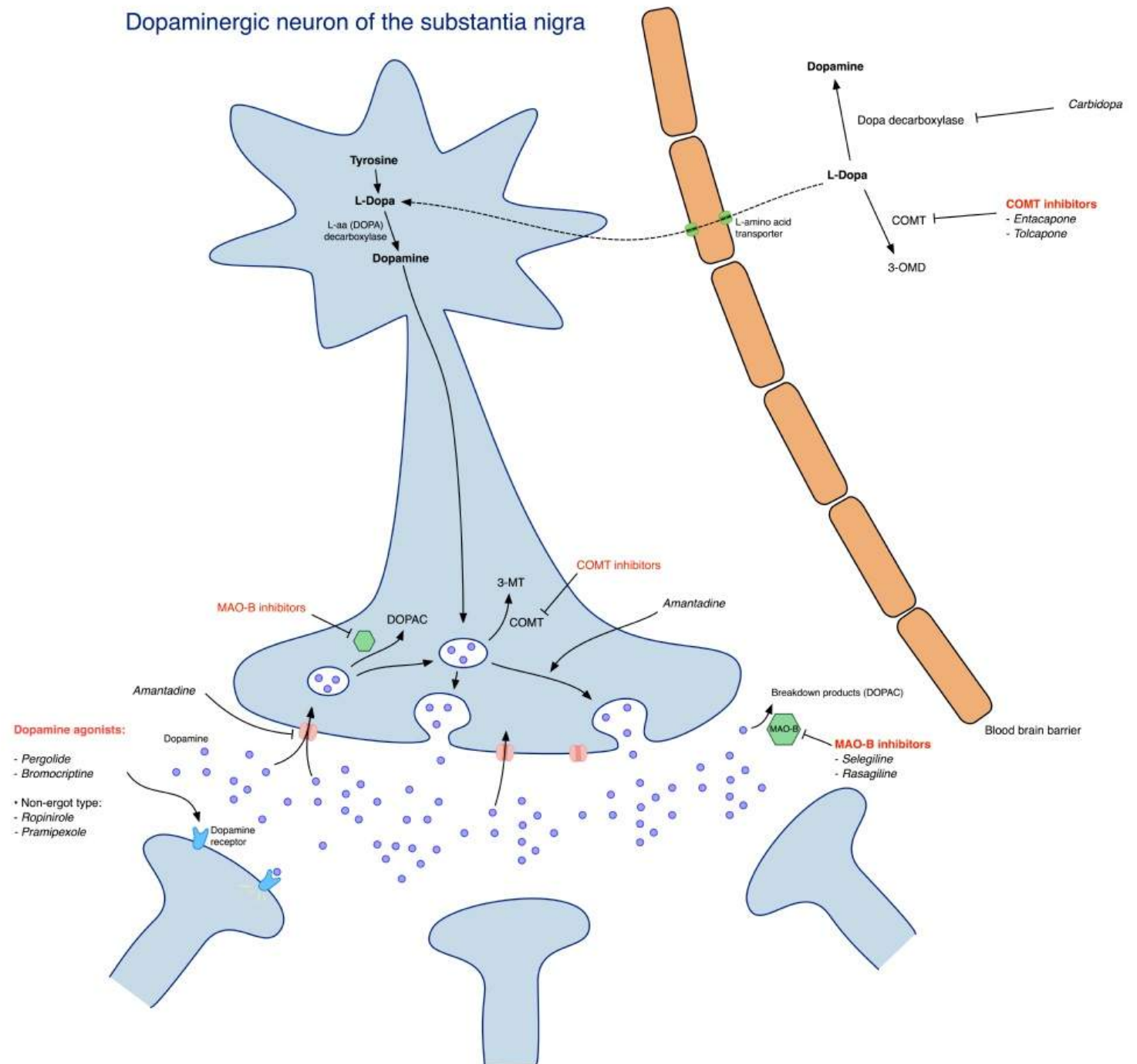
	Azathioprine
	Levodopa
	Digoxin
	Cabergoline
	Exenatide

Dashboard

Overall score: 0%

1 -

Dopaminergic neuron of the substantia nigra



Question 132 of 156

□ □

A 45-year-old lady presented to the emergency department with prolonged fever and malaise, She had a new murmur and clinical signs clearly indicating subacute bacterial endocarditis. ECHO confirms vegetations on her aortic valve and blood culture is still pending. She is a known case of myasthenia gravis and has been warned against taking some groups of antibiotics.

Which of the following antibiotics can worsen the symptoms of myasthenia gravis?

	Gentamicin
	Augmentin
	Meropenem
	Benzylpenicillin
	Trimethoprim sulphamethoxazole

Dashboard

Overall score: 0%

1 -

Question 132 of 156

□ □

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Dashboard

Overall score: **0%**

1 -

□ Question 133 of 156



A 25-year-old woman attends neurology clinic for on-going follow-up of her epilepsy. She had been diagnosed with generalised epilepsy 7 years previously, following a series of generalised tonic-clonic seizures. At the time of diagnosis, no specific cause for the patient's seizures had been identified. Since the patient's diagnosis, she had trialled a number of treatment combinations, with good seizure control achieved around 4 years after diagnosis.

During clinic review today, the patient declared herself in good general physical health. Her epilepsy continued to be well controlled, with one seizure in the past year and none in the previous 6 months. She also discussed her plans to start a family in the coming months and wanted to know if her current treatment regime would be safe during pregnancy. The patient explained that she had been reading about the risks of epilepsy drugs in pregnancy, and would be keen to alter her treatment regime to minimise the risks to her baby, even if that meant the patient experiencing an increase in seizure frequency.

The patient's previous experience with antiepileptic medications was discussed. The patient had been settled on a regime of lamotrigine 150 mg twice daily and topiramate 200 mg twice daily for the previous 2 years, and had not experienced any significant unwanted effects during this time. At the time of her epilepsy diagnosis, she had initially been treated with lamotrigine monotherapy, which failed to provide adequate seizure control. Subsequently, levetiracetam had been trialled as an adjunctive therapy but was poorly tolerated due to gastrointestinal symptoms and anorexia. Topiramate was then trialled as an adjunctive therapy with success, with titration of doses to the levels described above.

The patient took no other regular medications and had no other known drug allergies. She reported using a Mirena coil and condoms for contraception. The patient was employed as a junior solicitor and did not smoke or take any alcohol.

What is the most appropriate strategy to minimise risk to the patient and to the fetus in any future pregnancy?

	Aim for topiramate monotherapy at lowest effective dose
	Aim for lamotrigine monotherapy at lowest effective dose
	Aim for lamotrigine and carbamazepine dual-therapy
	Continue with current medication regime

Aim to stop all antiepileptic medications

Dashboard

Overall score: **0%**

1 -

□ Question 133 of 156



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	Aim for lamotrigine monotherapy at lowest effective dose
	Aim for lamotrigine and carbamazepine dual-therapy
	Continue with current medication regime

Aim to stop all antiepileptic medications

Dashboard

Overall score: **0%**

1 -

Question 134 of 156

□ □

A 52-year-old man on allopurinol for gout takes 20 mg of prednisolone per day for Crohn's disease, which was diagnosed 12 months ago. He has no other comorbidities of note. At present, he has a normal bowel habit with no loose stools or abdominal pain. He has been on the 20 mg dose of steroid for 12 months and is gaining significant amounts of weight. Each time you have reduced his dose to 15 mg, he has developed diarrhoea up to four times per day and required hospital admission for intravenous steroid therapy. This has happened three times in total. You wish to add in a steroid-sparing agent to enable the taper. Which agent should be avoided owing to significant interaction with allopurinol?

	Mesalazine
	Infliximab
	Methotrexate
	Azathioprine
	Adalimumab

Dashboard

Overall score: 0%

1 -

□ Question 134 of 156

□ □

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	Mesalazine
	Infliximab
	Methotrexate
	Azathioprine
	Adalimumab

Dashboard

Overall score: **0%****1** -

Question 135 of 156

A 65-year-old female presents to her GP with a four days history of non-itchy rashes on her face, neck and bilateral upper limbs. Her chest and abdomen are not affected. She does regular gardening. Her past medical history includes myocardial infarction and asthma. Further history reveals that last week she was seen in the cardiology outpatient clinic for arrhythmias and was started on a new medication. Which of the following drug is most likely causing the patient's symptom?

	Digoxin
	Dabigatran
	Verapamil
	Amiodarone
	Flecainide

Dashboard

Overall score: 0%

1 -

Question 135 of 156



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	Dabigatran
	Verapamil
	Amiodarone
	Flecainide

Dashboard

Overall score: **0%**

1 -

Question 136 of 156



A 55-year-old man is brought to the Emergency department after a house fire. According to ambulance crews, he was initially agitated and confused with tachycardia and hypertension, coupled with vomiting at the scene, but has become progressively more drowsy and confused. On arrival his blood pressure is 85/60 mmHg, his pulse is 38 beats per minute, respiratory rate is 10 breaths per minute and there are inspiratory crackles throughout on auscultation. His skin is flushed, you note incomprehensible moaning on abdominal palpation. Oxygen and IV fluids are commenced. Venous blood gas reveals a metabolic acidosis with a marked elevation in serum lactate.

Which of the following is the most appropriate intervention?

	Amyl nitrate
	Atropine
	Dicobalt edetate
	DMSA
	Vitamin C

Dashboard

Overall score: 0%

1 -

Question 136 of 156



A 55-year-old man is brought to the Emergency department after a house fire. According to ambulance crews, he was initially agitated and confused with tachycardia and hypertension, coupled with vomiting at the scene, but has become progressively more drowsy and confused. On arrival his blood pressure is 85/60 mmHg, his pulse is 38 beats per minute, respiratory rate is 10 breaths per minute and there are inspiratory crackles throughout on auscultation. His skin is flushed, you note incomprehensible moaning on abdominal palpation. Oxygen and IV fluids are commenced. Venous blood gas reveals a metabolic acidosis with a marked elevation in serum lactate.

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	Atropine
	Dicobalt edetate
	DMSA
	Vitamin C

Dashboard

Overall score: 0%

1 -

Question 137 of 156

□ □

The Emergency Medical Team were summoned by the urology team. A 62-year-old gentleman was admitted to the care of the urology team a few hours ago complaining of haematuria and loin pain. A CT scan of his abdomen revealed the presence of renal calculi and he was being treated conservatively with intravenous saline hydration therapy, as well as intravenous paracetamol 1g QDS and IV morphine 10mg stat boluses when required. Approximately an hour ago he complained of distressing nausea and vomiting and was administered metoclopramide 10mg IV bolus with a good response. However, over the last few minutes he developed severe neck stiffness and was unable to open his eyelids. His jaw was locked and his tongue was protruding. He had a past medical history comprising panic attacks, type 2 diabetes mellitus, hypertension, hypercholesterolaemia, chronic kidney disease stage 3 and osteoarthritis. In addition to the above medication, his drug history included diazepam 2mg TDS PRN, metformin 500mg TDS, gliclazide 80mg OD, ramipril 5mg OD, atorvastatin 20mg ON and naproxen 500mg BD PRN.

Examination revealed the presence of an acutely compromised gentleman. His head was rotated to the left and fixed in position, with a protruding tongue and a fixed locked jaw. His eyelids were closed. His back was arched, his upper limbs were flexed and his lower limbs were extended. He was very distressed but was sustaining respiratory effort with a respiratory rate of 32/min and oxygen saturations of 96% on air. His chest was clear to auscultate and cardiovascular examination was unremarkable except for the presence of a tachycardia of 132 bpm. His blood pressure was 122/78 mmHg. His temperature was 37.4°C. He was unable to speak but seemed to be fully alert. His capillary blood sugar was 8.2.

A 15 litre/min non-rebreathe oxygen mask was attached; he did not tolerate a Guedel airway insertion. Intravenous access was secured.

What is the next single best immediate management step?

	Crash bleep the anaesthetics team to assist in supporting his airway
	Administer IM lorazepam
	Administer IV adrenaline
	Administer IV dantrolene
	Administer IM procyclidine

Dashboard

Overall score: **0%**

1 -

Question 137 of 156

The Emergency Medical Team were summoned by the urology team. A 62-year-old gentleman was admitted to the care of the urology team a few hours ago complaining of haematuria and loin pain. A CT scan of his abdomen revealed the presence of renal calculi and he was being treated conservatively with intravenous saline hydration therapy, as well as intravenous paracetamol 1g QDS and IV morphine 10mg stat boluses when required. Approximately an hour ago he complained of distressing nausea and vomiting and was administered metoclopramide 10mg IV bolus with a good response. However, over the last few minutes he developed severe neck stiffness and was unable to open his eyelids. His jaw was locked and his tongue was protruding. He had a past medical history comprising panic attacks, type 2 diabetes mellitus, hypertension, hypercholesterolaemia, chronic kidney disease stage 3 and osteoarthritis. In addition to the above medication, his drug history included diazepam 2mg TDS PRN, metformin 500mg TDS, gliclazide 80mg OD, ramipril 5mg OD, atorvastatin 20mg ON and naproxen 500mg BD PRN.

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Dashboard

Overall score: **0%**

1 -

Question 138 of 156

□ □

A 35 year old woman is brought to the Emergency Department by blue light ambulance unconscious. She is accompanied by a friend who has found her surrounded by empty packets of diazepam, zopiclone and lamotrigine and two empty wine bottles.

On assessment she has a nasopharyngeal airway in situ, placed by the ambulance crew. Respiratory rate is 8 breaths per minute with an oxygen saturation of 97% on 15L/min oxygen via non rebreathe mask. The blood pressure is 95/45mmHg and heart rate is 100bpm. Blood glucose is 6.7mmol/L. She is globally hypotonic but plantars are downgoing. Pupils are size 2 and minimally reactive. GCS is 7/15 (E2V1M4).

Arterial blood gases show:

pH	7.22	HCO ₃ ⁻	18.5mmol/L
pCO ₂	7.19kPa	Base excess	-6.6mmol/L
pO ₂	7.80kPa	Lactate	3.1mmol/L

What is the most appropriate management option?

	200micrograms IV flumazenil
	400micrograms IV naloxone
	12mg cyproheptadine orally
	No intervention necessary - supportive management on the ward
	Intubate and ventilate

Overall score: **0%**

1 -

□ Question 138 of 156

□ □

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Overall score: **0%**

1 -

□ Question 139 of 156



A 25-year-old woman presents to the Emergency department some 90 mins after taking 50x300mg aspirin tablets. She feels nauseated, has vomited once, complains of severe tinnitus, and is hyperventilating. She has no past medical history of note and takes no regular medications. Examination reveals a blood pressure of 105/70 mmHg, pulse is 87 beats per minute and regular. Chest is clear, respiratory rate is elevated at 35/min. She has been given activated charcoal on admission. 1 litre of normal saline given intravenously over 1hr is in progress.

investigations

Hb	125 g/l
Platelets	189 * 10 ⁹ /l
WBC	10.2 * 10 ⁹ /l

Na ⁺	145 mmol/l
K ⁺	3.1 mmol/l
Urea	6.1 mmol/l
Creatinine	90 µmol/l
pH	7.54
Serum salicylate	4.2 mmol/l

Which of the following is the most appropriate next step?

	IV furosemide
	IV sodium bicarbonate
	Oral diazepam

	Referral for haemodialysis
	Repeated activated charcoal

Dashboard

Overall score: **0%**

1 -

□ Question 139 of 156



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	IV sodium bicarbonate
	Oral diazepam

	Referral for haemodialysis
	Repeated activated charcoal

Dashboard

Overall score: **0%**

1 -

Question 140 of 156

□ □

An 85-year-old female is admitted under the general medical unit with acute thoracic back pain from a T6 crush fracture following a fall. She has a past history of systolic heart failure, depression and osteoporosis.

Her regular medications included aspirin, frusemide, spironolactone, bisoprolol, sertraline and calcium, vitamin D and weekly alendronate. These are continued throughout her admission.

Two days into her admission, the nurses note that she is agitated and a bit confused.

On examination, she looks flushed and is tachycardic with a heart rate of 120 beats/min and is hypertensive with a blood pressure of 185/70 mmHg, but is afebrile. Both her pupils are mildly dilated, she is mildly tremulous and is noted to have deep tendon hyperreflexia with easily inducible clonus.

Use of which of the following analgaesic medication could explain her current symptoms?

	Paracetamol
	Ibuprofen
	Oxycodone
	Tramadol
	Hydromorphone

Dashboard

Overall score: 0%

1 -

Question 140 of 156

□ □

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	Paracetamol
	Ibuprofen
	Oxycodone
	Tramadol
	Hydromorphone

Dashboard

Overall score: **0%**

1 -

□ Question 141 of 156

□ □

A 19 year old man was brought by his friends to the Emergency Department after becoming unwell on a night out. He had collapsed while dancing then felt very anxious and jittery. On close questioning the patient confessed to taking three tablets of ecstasy during his night out. He had also drunk two beers but insisted he had kept himself hydrated with water later on in the evening. The patient had no past medical history and took no regular medications.

Initial assessment was as documented below.

Airway

- Patient's own

Breathing

- Respiratory rate 20 / minute
- No respiratory distress
- O2 saturations 99 % (air)
- Clear lung fields with air entry throughout

Circulation

- Mild-moderate dehydration
- HR 110 bpm regular
- BP 176 / 95 mmHg
- JVP not elevated
- Heart sounds normal

Disability

- Temperature 37.5°C
- GCS 15/15; anxious
- Pupils equal and reactive to light
- Full range of eye movements
- Good power of arms and legs
- Slight increased tone in arms and legs, 6 beats of clonus inducible on angle dorsiflexion
- Generalised hyper-reflexia

Exposure

- Abdomen soft and non-tender
- No evidence of external or bony injury

Results of a venous blood sample are given below.

pH	7.36
Bicarbonate	24.6 mmol / L (20.0-26.0)
Base excess	-0.9 mmol / L
Sodium	136 mmol / L
Potassium	4.5 mmol / L
Lactate	1.8 mmol / L

What is the correct management of this patient?

	Intravenous chlorpromazine
	Oral cyproheptadine
	Oral diazepam
	Intravenous midazolam
	Slow intravenous fluids; observation

Dashboard

Overall score: 0%

1 -

□ Question 141 of 156

□ □

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	Oral diazepam
	Intravenous midazolam
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Dashboard

Overall score: **0%**

1 -

□ Question 142 of 156

□ □

A 27 year old well-nourished male electroplater is admitted to hospital with abdominal pain and neurological symptoms. He tells you that he has had worsening symptoms for the past three months with severe central abdominal pain, diarrhoea, vomiting and painful burning sensation in both feet. He also describes increasing clumsiness with loss of manual dexterity and tripping over his feet frequently. He describes dimming of his vision over the past two weeks with a sepia tinge. On examination, there is mild voluntary guarding of the abdomen but no discrete masses and no organomegaly. The cardiorespiratory examination is normal. Examination of the neurological system reveals distal weakness with MRC power grade 4/5 in all limbs but normal proximal power. There is a mild tremor present with his arms outstretched and trunk ataxia. Sensory examination discloses painful paraesthesia in the hands and feet with hyperalgesia. There is a loss of proprioception. The cranial nerves are notable in that a left sixth nerve palsy is present with accompanying diplopia. Visual acuity is reduced to 6/30 bilaterally and eye movements are painful. He has a bilateral ptosis. He is noted to have minimal body hair, including hairless arms and legs, lateral third of the eyebrow and temporal and crown baldness which he tells you occurred in the past month. He also has scaling of the palms and soles, tender glossitis and transverse white lines on all his nails. He is cyclothymic during assessment.

What is the most appropriate management for this patient?

	High dose IV hydrocortisone 200mg three times daily
	High dose IV vitamin B complex (Pabrinex I+II) and folinic acid
	Intravenous immunoglobulins
	Oral Prussian Blue 10g twice daily
	Procaine penicillin (G) 2 million unit daily IM with oral probenecid

Dashboard

Overall score: 0%

1 -

□ Question 142 of 156

□ □

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Dashboard

Overall score: **0%****1** -

Question 143 of 156

□ □

A 61 year old man with a history of bipolar affective disorder presents to the Emergency Department with a 2 week history of feeling unwell. This started off as a coarse tremor in the limbs and has now progressed to slurred speech and disorientation. On examination you find an ataxic gait and myoclonus. His lithium level 2.6. You diagnose lithium toxicity. In addition to bipolar affective disorder, he has a history of rheumatoid arthritis, atrial fibrillation and GORD. Which of the following recent events is most likely to explain the cause of his toxicity?

	Recent addition of carbamazepine to augment lithium
	Recent prescription of naproxen for knee pain
	Recent increase in caffeine intake
	Recent addition of amiodarone for atrial fibrillation
	Recent use of sodium bicarbonate tablets for symptoms of dyspepsia

Dashboard

Overall score: 0%

1 -

Question 143 of 156

□ □

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	Recent addition of amiodarone for atrial fibrillation
	Recent use of sodium bicarbonate tablets for symptoms of dyspepsia

Dashboard

Overall score: **0%**

1 -

Question 144 of 156

□ □

A 17-year-old girl presents to the emergency department with her mother. She is drowsy, ataxic, vomiting, her heart rate is 130 beats per minute and her blood pressure 130/84 mmHg. Her only past medical history is epilepsy which has recently been well controlled. After arguing with her boyfriend 40 minutes ago she took an unknown quantity of sodium valproate.

Following initial fluid resuscitation which of the following would you implement?

	Activated charcoal
	Observe for 3 hours and discharge
	Fomepizole
	Loperamide
	Transfer to psychiatric bed

Dashboard

Overall score: 0%

1 -

Question 144 of 156

□ □

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	Fomepizole
	Loperamide
	Transfer to psychiatric bed

Dashboard

Overall score: **0%**

1 -

Question 145 of 156



A 49-year-old woman with a diagnosis of Hashimoto's thyroiditis is seen in clinic with recurrence of lethargy, constipation, cold intolerance and pedal oedema. These symptoms had previously resolved on starting treatment with levothyroxine.

Her co-morbidities include type 2 diabetes mellitus and hypertension. She was also diagnosed with mycobacterium tuberculosis of the lung five months ago. Her current medications are levothyroxine, amlodipine, ramipril, metformin, gliclazide, rifampicin, isoniazid and pyridoxine.

Her temperature is 36.5°C, pulse 55 beats per minute, blood pressure 165/102 mmHg and respiratory rate 15 breaths per minute.

Thyroid function tests showed:

Free thyroxine (T4)	5 pmol/L (10-25)
Free triiodothyronine (T3)	3 pmol/L (5-10)
Thyroid-stimulating hormone	7.2 mU/L (0.4-5.0)

What is the likely cause of her symptoms?

	Vitamin B6 deficiency
	Rifampicin
	Isoniazid
	Non-compliance with medications
	Amlodipine

Overall score: **0%**

1 -

Question 145 of 156



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Overall score: **0%**

1 -

Question 146 of 156

□ □

You receive a request for a second opinion from a GP who has performed a general physical check on one of their new patients. He is a 54 year old man who is from Thailand. He had been complaining of low mood, fatigue and sensitivity to the cold. His body mass index is 31 kg/m². The following is a list of investigations performed by the GP.

Na ⁺	141 mmol/l
K ⁺	4.8 mmol/l
Urea	9.8 mmol/l
Creatinine	142 µmol/l
CRP	4 mg/l

Bilirubin	14 µmol/l
ALP	86 u/l
ALT	27 u/l
Calcium	2.89 mmol/l
Albumin	39 g/l
TSH	24.0 mU/l
Free T4	0.8 pmol/l
Free T3	0.4 pmol/l

ECG: Heart rate 68, sinus rhythm, QRS width 128ms, flattened T waves V1 to V6

The patient has told the GP that he takes one medication regularly but is unable to give the name. Which medication is most likely to cause the following abnormalities?

Bendroflumethiazide

	Amiodarone
	Lithium
	Carbimazole
	Propylthiouracil

Dashboard

Overall score: **0%**

1 -

Question 146 of 156



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Dashboard

Overall score: **0%**
1 -

□ Question 147 of 156



A 26-year-old female presented with lethargy, intermittent low grade fever, bilateral wrist pain, pleuritic type chest pain and an erythematous scaly rash perinasally. She had no significant medical history and her family history was significant for an aunt with autoimmune hepatitis and a brother with type 1 diabetes and pernicious anaemia.

Examination reveals a well young lady. Blood pressure 110/78mmHg and pulse 76/min. Abdominal and cardiovascular examination were normal. There was dullness to percussion over both lung bases. She had swelling and tenderness of her wrists. A malar rash on a background of moderate facial acne with some scarring were noted. She gives a history of acne which has improved ever since she started taking minocycline prescribed by her GP 3 months ago. She is also on oral contraceptives for irregular periods.

Investigations:

Hb	10.3 g/dl
MCV	79 fl
Platelets	$256 \times 10^9/l$
WBC	$7 \times 10^9/l$
Creatinine	88 $\mu\text{mol/L}$
Na+	140 mmol/L
K+	3.6 mmol/L
ANA	Positive
Anti dsDNA	Negative
Chest X-ray	Blunting of costophrenic angles bilaterally
Complements C3 & C4	normal

What investigation is most likely to confirm the suspected diagnosis?

--	--

	Serum rheumatoid factor, anti Ro, anti La
	Renal biopsy
	Wrist X-ray
	Anti histone antibody
	Repeat serum anti dsDNA to rule out lab error

Dashboard

Overall score: 0%

1 -

□ Question 147 of 156



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Dashboard

Overall score: **0%**

1 -

Question 147 of 156

A 26-year-old female presented with lethargy, intermittent joint pain, and an erythematous scaly rash perinasally. She has a history of an aunt with autoimmune hepatitis and a brother with systemic lupus erythematosus.

Examination reveals a well young lady. Blood pressure and examination of her wrists were normal. There was dullness to percussion at the base of her lungs. A malar rash on a background of moderate acne which has improved ever since she started taking oral contraceptives for irregular periods.

Investigations:

Hb	10.3 g/dl
MCV	79 fl
Platelets	$256 \times 10^9/l$
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	Wrist X-ray
	Anti histone antibody
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Dashboard

Overall score: **0%**

1 -

Question 148 of 156

□ □

A 59-year-old man suddenly becomes unwell on the oncology unit. He is receiving an intravenous infusion of a new chemotherapy agent as part of a clinic trial. He says he feels very lightheaded. On examination his blood pressure is 80/50 mmHg, heart rate is 120/min, oxygen saturations are 94% on air and bilateral wheeze is heard on auscultation of the chest. An ECG shows a sinus tachycardia of 120 beats per minute. The infusion is stopped, the patient is lay flat with their legs raised and an arrest call has been put out.

What should you administer immediately?

<input type="checkbox"/>	0.5mL of 1:1000 intramuscular adrenaline
<input type="checkbox"/>	0.5mL of 1:10000 intramuscular adrenaline
<input type="checkbox"/>	0.5mL of 1:1000 intravenous adrenaline
<input type="checkbox"/>	0.5mL of 1:10000 intravenous adrenaline
<input type="checkbox"/>	1mL of 1:10000 intravenous adrenaline

Dashboard

Overall score: **0%**

1 -

□ Question 148 of 156

□ □

A 59-year-old man suddenly becomes unwell on the oncology unit. He is receiving an intravenous infusion of a new chemotherapy agent as part of a clinic trial. He says he feels very lightheaded. On examination his blood pressure is 80/50 mmHg, heart rate is 120/min, oxygen saturations are 94% on air and bilateral wheeze is heard on auscultation of the chest. An ECG shows a sinus tachycardia of 120 beats per minute. The infusion is stopped, the patient is lay flat with their legs raised and an arrest call has been put out.

What should you administer immediately?

	0.5mL of 1:1000 intramuscular adrenaline
	0.5mL of 1:10000 intramuscular adrenaline
	0.5mL of 1:1000 intravenous adrenaline
	0.5mL of 1:10000 intravenous adrenaline
	1mL of 1:10000 intravenous adrenaline

Dashboard

Overall score: **0%**

1 -

Question 149 of 156

□ □

A 50-year-old female is admitted on the acute medical take with palpitations. She recalls on-and-off palpitations for over one year, however today they have been ongoing. On examination, she is haemodynamically stable with an irregularly irregular pulse of 140 b.p.m. There is no clinical evidence of heart failure. Her ECG shows atrial fibrillation. Which of the following medical conditions is a contra-indication to initiating beta-blocker therapy in this patient?

	Intercurrent treatment with dihydropyridine calcium-channel blockers
	Phaeochromocytoma on phenoxybenzamine
	Sick sinus syndrome with a permanent pacemaker
	Second-degree heart block
	Mild peripheral vascular disease

Dashboard

Overall score: 0%

1 -

Question 149 of 156

□ □

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	Sick sinus syndrome with a permanent pacemaker
	Second-degree heart block
	Mild peripheral vascular disease

Dashboard

Overall score: **0%**

1 -

Question 150 of 156

□ □

A 67-year-old man with a history of ischaemic heart disease and type 2 diabetes mellitus is noted to have non-visible haematuria during an annual review. He is currently feeling well and is asymptomatic. The urine dipstick showed blood ++, with no protein and no leucocytes. This result is repeated one week later.

His current medications include aspirin, bisoprolol, atorvastatin, ramipril, metformin and pioglitazone.

Which one of the following drugs should be stopped whilst awaiting further investigations?

	Aspirin
	Ramipril
	Atorvastatin
	Metformin
	Pioglitazone

Dashboard

Overall score: 0%

1 -

□ Question 150 of 156

□ □

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Which one of the following drugs should be stopped whilst awaiting further investigations?

	Aspirin
	Ramipril
	Atorvastatin
	Metformin
	Pioglitazone

Dashboard

Overall score: **0%****1** -

Question 151 of 156

□ □

A 54-year- old lady with a back pain is being managed with 1g paracetamol four times a day and ibuprofen which has been titrated up to the maximum dose of 2.4g/daily. Although she is tolerating this well, she is still complaining of ongoing pain. What is the best option to improve her pain control?

	Stop paracetamol, continue ibuprofen and commence naproxen
	Continue paracetamol, continue ibuprofen and commence naproxen
	Stop paracetamol, stop ibuprofen and commence morphine
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Dashboard

Overall score: 0%

1 -

Question 151 of 156

□ □

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Dashboard

Overall score: **0%**

1 -

Question 152 of 156



An 82-year-old man is referred to neurology clinic with slowness. He presented with his wife who reported that he has been becoming progressively slower in his movements and his facial expressions have become more limited. His symptoms have progressed rapidly following the onset of dizziness a few weeks ago. He has a past medical history of type two diabetes, hypertension, high cholesterol, previous hemicolectomy for diverticulitis. His current medications include ramipril, atorvastatin, paracetamol, amlodipine, metformin, prochlorperazine and gliclazide.

On examination, he has a coarse bilateral tremor at rest, and rigidity in both arms. He has a slow gait as well. What is the most likely diagnosis?

	Parkinson's disease
	Drug-induced parkinsonism
	Multi-system atrophy
	Vascular parkinsonism
	Wilson's disease

Dashboard

Overall score: 0%

1 -

Question 152 of 156



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Dashboard

Overall score: 0%

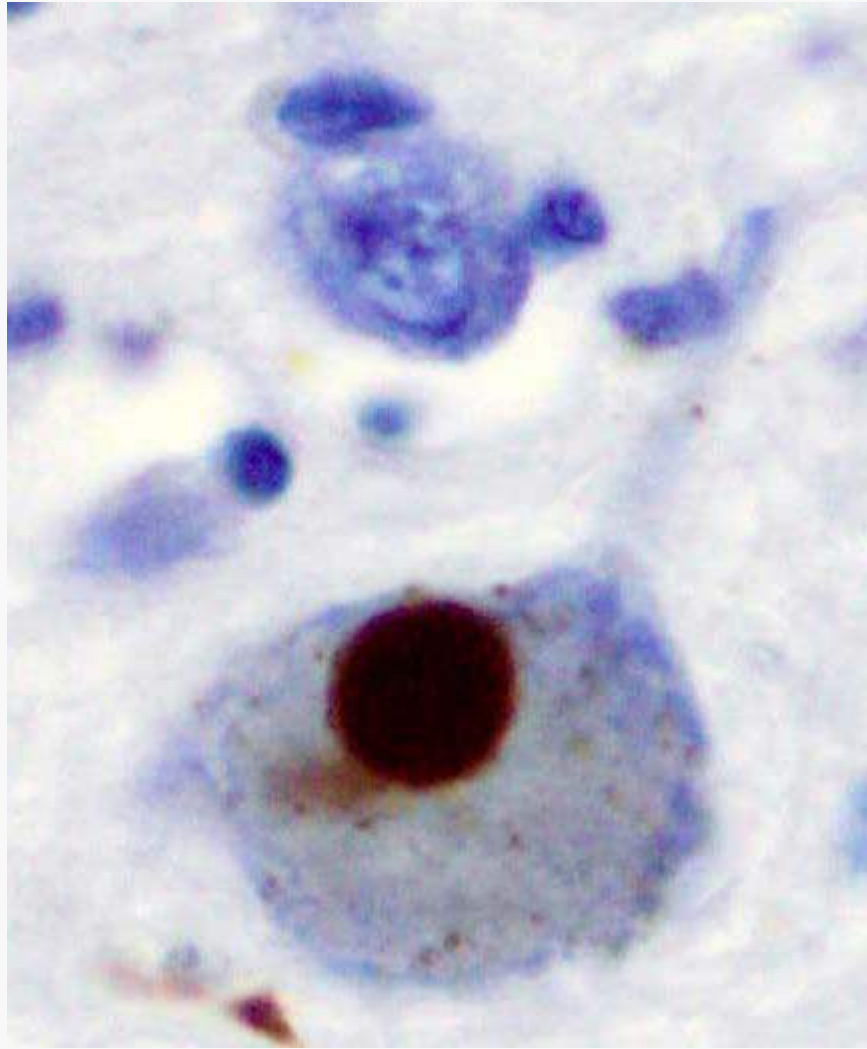
1 -

Question 152 of 156

An 82-year-old man is referred to neurology clinic who has been becoming progressively slower in his movements. His symptoms have progressed rapidly following the onset of type two diabetes, hypertension, high cholesterol, and he takes drugs which include ramipril, atorvastatin, paracetamol, amlodipine.

On examination, he has a coarse bilateral tremor at rest. What is the most likely diagnosis?

<input type="radio"/>	Parkinson's disease
<input checked="" type="radio"/>	Drug-induced parkinsonism
<input type="radio"/>	Multi-system atrophy
<input type="radio"/>	Vascular parkinsonism
<input type="radio"/>	Wilson's disease



Dashboard

Overall score: **0%**

1 -

□ Question 152 of 156

□ □

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	Multi-system atrophy
	Vascular parkinsonism
	Wilson's disease

Dashboard

Overall score: **0%****1** -

Normal substantia nigra



Loss of pigmented cells in Parkinson's



Question 153 of 156

□ □

A 19 year old girl is brought to the Emergency Department by a friend. She is a first year university student and her friends are concerned her behaviour has altered in the past few weeks. On assessment she is confused with an AMTS of 6/10. She has a flat affect. Cardiorespiratory examination is normal although the respiratory rate is 22 at rest. Oxygen saturations are 97% on air. Heart rate is 85bpm regular and blood pressure is 100/55 mmHg.

Examination of her neurological system reveals prominent paraesthesia in both feet with absent vibration sense and proprioception. The ankle and knee reflexes are absent and plantar responses are extensor. There is mild distal weakness in the legs with MRC grading 4/5. Examination of the cranial nerves shows no evidence of nystagmus but visual acuity is reduced to 6/20 bilaterally. She has an ataxic gait.

Her medical history is significant only for coeliac disease and she is taking no regular medications.

Routine blood results show:

Haemoglobin	7.6g/L	Sodium	137mmol/L	Magnesium	0.81mmol/L
Cell volume	103.2fL	Potassium	4.6mmol/L	CRP	4.5mg/L
White cells	5.9x10 ⁹ /L	Urea	1.9mmol/L	Thyroid tests	Normal
Neutrophils	4.0x10 ⁹ /L	Creatinine	55mol/L	HIV	Negative
Lymphocytes	1.9x10 ⁹ /L	Calcium (corr)	2.43mmol/L	Syphilis	Negative
Platelets	300x10 ⁹ /L	Phosphate	1.01mmol/L		

The patient's friend tells you she has recently started using recreational party drugs.

Which of the following inhaled recreational drugs most explains the above picture?

	Crack (cocaine)
	H (heroin)

	Hippie crack (nitrous oxide)
	Poppers (amyl nitrate)
	Spice (synthetic cannabinoid)

Dashboard

Overall score: **0%**
1 -

Question 153 of 156

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Neutrophils	$4.0 \times 10^9/L$	Creatinine	55mol/L	HIV	Negative
Lymphocytes	$1.9 \times 10^9/L$	Calcium (corr)	2.43mmol/L	Syphilis	Negative
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	Hippie crack (nitrous oxide)
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	Spice (synthetic cannabinoid)

Dashboard

Overall score: **0%**
1 -

□ Question 154 of 156



A 19-year-old male is found collapsed in a dark alley. He is of no known abode. He is very drowsy but oriented to person, place and time with a Glasgow coma scale of 14/15 (E3, V5, M6). He smells of alcohol but denies having consumed any. His clinical examination is significant for impairment in visual acuity bilaterally. He has a tremor of his outstretched hands but the rest of his examination is normal. His blood pressure is 145/76mmHg with a pulse of 101/min regular, respiratory rate of 22/min and an oxygen saturation of 95% on room air.

Investigations:

Hb	11.3 g/dl
MCV	102 fl
Platelets	$110 \times 10^9/l$
WBC	$12 \times 10^9/l$
Creatinine	117 $\mu\text{mol/L}$
Urea	9 $\mu\text{mol/L}$
Na ⁺	146 mmol/L
K ⁺	5.4 mmol/L
CL ⁻	109 mmol/L

Arterial blood gas:

pH	7.21
PaO ₂	10.9 kPa
PaCO ₂	4.2 kPa
HCO ₃	16 mEq/L

Considering the ingested toxin, what is the next best step in your management?

	Fomepizole
	N-acetyl cysteine
	Activated charcoal
	Gastric lavage
	Sodium bicarbonate

Dashboard

Overall score: **0%**

1 -

□ Question 154 of 156



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Dashboard

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1 -

Question 155 of 156

□ □

A 24-year-old woman attends the respiratory clinic for a review of her asthma treatment. The patient reported that overall, her symptoms of asthma had been well controlled in the 6 months since her last review. She had not suffered any significant exacerbations of her asthma in that time and felt she was required to use her salbutamol inhaler only around once per week (which represented a significant improvement over her normal control). The patient also reported that she was now 3 months pregnant, and had just had an unremarkable 12-week ultrasound. While she had not been planning to have a baby, the patient reported being very happy about it, and she was keen to maximise her health during this time.

The patient had a long-standing diagnosis of asthma, with her first presentations during early childhood. While the illness had only caused mild symptoms between the ages of 10 and 15 years, the patient had suffered several severe exacerbations of asthma in her late teenage years, coinciding with the time when the patient had become a regular smoker. The patient did not report any other significant on-going health problems or past medical history. In particular, she denied a history of seizures, high blood pressure or mental health problems.

The patient's current asthma treatment was a salmeterol-fluticasone combination inhaler (Seretide Accuhaler 250), one puff twice daily. She was also prescribed a metered-dose salbutamol inhaler for use as required. The patient had no history of drug allergies.

The patient reported that she continued to be a regular cigarette smoker. Since finding out she was pregnant, she had managed to reduce her regular intake to 12 cigarettes per day, reduced from her previous typical intake of 20 cigarettes per day. The patient was motivated to use her pregnancy as a motivating factor to stop smoking permanently, and during the clinic asked about medication to assist her with quitting.

What is the appropriate drug treatment strategy to assist this patient to stop smoking?

	Nicotine replacement patch with short-acting nicotine replacement
	Varenicline
	No drug treatment options available
	Bupropion

Dashboard

Overall score: 0%

1 -

Question 155 of 156

□ □

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Dashboard

Overall score: **0%**

1 -

Question 156 of 156



The patient below has noticed a gradual change to his facial skin since starting a new medication a few months ago:



© Image used on license from DermNet NZ

Which drug has he been taking?

	Amiodarone
	Phenytoin
	Ciclosporin
	Digoxin
	Sildenafil

Overall score: **0%**

1 -

Question 156 of 156



The patient below has noticed a gradual change to his facial skin since starting a new medication a few months ago:



© Image used on license from DermNet NZ

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Overall score: **0%**

1 -